



Town of Arlington, MA Redevelopment Board

Agenda & Meeting Notice November 10, 2025

Per Board Rules and Regulations, public comments will be accepted during the public comment periods designated on the agenda. Written comments may be provided by email to cricker@town.arlington.ma.us by Monday, November 10, 2025, at 3:00 pm. The Board requests that correspondence that includes visual information should be provided by Monday, November 10, 2025, at 10:00 am. Please note that all times are estimates; individual agenda items may occur earlier or later than the time noted.

The Arlington Redevelopment Board will meet Monday, November 10, 2025 at 7:30 PM in the **Arlington Community Center, Main Hall, 27 Maple Street, Arlington, MA 02476**

1. Review Meeting Minutes

7:30 pm The Board will review and vote to approve meeting minutes from October 20, 2025.

2. Public Hearing: Docket #3867, 9-11 Robbins Rd (continued from September 15)

7:35 pm The Board will vote to continue the public hearing to December 1, 2025.

3. Public Hearing: Docket #3866, 18 Grafton St (continued from September 8)

7:40 pm Notice is herewith given that an application has been filed on August 14, 2025, by Albert Azatyants, SA Development Corp, 200F Main St, Box 352, Stoneham, MA 02180, to open Docket #3866 in accordance with the provisions of the Town of Arlington Zoning Bylaw Section 5.9.3, Site Plan Review. The applicant proposes to demolish an existing single-family dwelling and construct a six-unit residential building on the property located at 18 Grafton Street, Arlington, MA, in the R2 Residential District and Neighborhood Multi-Family Housing Overlay District.

- DPCH staff will be provided 5 minutes for an overview of their Public Hearing Memorandum.
- Applicant will be provided 10 minutes for an introductory presentation.
- Members of the public will be provided time to comment.
- Board members will discuss Docket and may vote.

4. Public Hearing: Docket #3869, 1513-1515 and 1517-1519 Mass Ave (continued from October 6)

8:25 pm Notice is herewith given that an application has been filed on August 27, 2025, by Yevgeny Bernshtein, IG Investments LLC, 226 Harvard Street, Brookline, MA 02446, to open Special Permit Docket #3869 in accordance with the

provisions of MGL Chapter 40A § 11, and the Town of Arlington Zoning Bylaw Sections 3.3, Special Permits, and 3.4, Environmental Design Review. The applicant proposes to demolish the existing single-family and two-family buildings and construct a mixed-use building containing 15 residential units and one commercial unit on the property located at 1513-1515 and 1517-1519 Massachusetts Ave, Arlington, MA, in the B2A Neighborhood Office District.

- DPCD staff will be provided 5 minutes for an overview of their Public Hearing Memorandum.
- Applicant will be provided 10 minutes for an introductory presentation.
- Members of the public will be provided time to comment.
- Board members will discuss Docket and may vote.

5. Discussion of 455 Mass Ave

9:10 pm The Board will discuss the façade of 455 Mass Ave.

6. 2026 Meeting Schedule – January

9:25 pm The Board will vote to approve the dates of their January 2026 meetings.

7. Open Forum

9:30 pm Except in unusual circumstances, any matter presented for consideration of the Board shall neither be acted upon, nor a decision made, the night of the presentation. There is a three-minute time limit to present a concern or request.

8. New Business

9:45 pm

9. Adjourn

10:00 pm (Estimated)

10Correspondence

18 Grafton St:

- Fleming, J - 11/1/25



Town of Arlington, Massachusetts

Review Meeting Minutes

Summary:

7:30 pm The Board will review and vote to approve meeting minutes from October 20, 2025.

ATTACHMENTS:

Type	File Name	Description
▢ Meeting Minute (draft)	10202025_DRAFT_Minutes_Redevelopment_Board.pdf	10202025 DRAFT Minutes Redevelopment Board

Arlington Redevelopment Board
Monday, October 20, 2025, at 7:30 PM
Community Center, Main Hall
27 Maple Street, Arlington, MA 02476
Meeting Minutes

This meeting was recorded by ACMI.

PRESENT: Rachel Zsebery (Chair), Eugene Benson, Shaina Korman-Houston, Kin Lau, Stephen Revilak

STAFF: Claire Ricker, Director of Planning and Community Development; Sarah Suarez, Assistant Director of Planning and Community Development

The Chair called the meeting of the Board to order.

The Chair opened with **Agenda Item 1 – Review Meeting Minutes.**

October 6, 2025 – The Board members made no changes to the minutes. The Chair requested a motion to approve the minutes as submitted. Mr. Lau so moved, Mr. Benson seconded, and the Board voted unanimously in favor.

The Chair moved to **Agenda Item 2 – Public Hearing: Docket #3862, 126 Broadway (continued from August 11, 2025).**

Ms. Ricker explained that the applicant proposes to demolish an existing two-family dwelling and detached garage and construct a five-story mixed-use building with one approximately 1,400 square-foot commercial unit and residential parking on the ground floor and 14 residential units above, on the property located at 126 Broadway, in the Residential Two-Family District and the Massachusetts Avenue/Broadway Multi-Family (MBMF) Housing Overlay District. Since the previous hearing, the applicant has submitted additional materials, including updated architectural plans and drawings, updated color elevations, an updated shadow study, a Transportation Demand Management (TDM) Plan, a landscape plan and narrative.

Architect Tim Johnson explained that multiple changes have been made to the plans since the last hearing:

- The façade of the ground floor commercial space has been brought out to the property line.
- The area of the commercial space has been increased to 43% of the ground floor.
- A bathroom has been added to the commercial space.
- The accessible parking space has been moved to the interior of the garage.
- The trash and recycling containers have been moved inside the open garage.
- Specifications for the two-tier long-term bicycle racks have been provided.
- The parking has been reconfigured so that cars can back into spaces, and all cars can exit onto the street going forward.
- A mirror has been added for exiting cars to better see pedestrians.
- The massing of the building has been broken up by adding balconies, bringing the brick storefront of the commercial space forward to the sidewalk and making it more prominent, and stepping back the fourth and fifth floors.
- A stronger sign band has been added to the commercial space.
- The front windows of the commercial space along Broadway have been reconfigured, and the windows on the north side of the commercial space, facing the stockade fence, have been removed.
- The height of the ground-floor commercial space has been increased to approximately 10'10". The height of the additional floors has been reduced to 9', resulting in the overall height of the building being reduced from 50' to 48'.

The applicant has also provided a new landscape plan. Three existing trees will be preserved, and two new trees will be planted. One existing tree on Broadway with a tall canopy has been cut back multiple times, so it is somewhat stunted. A new smaller tree is proposed for Broadway so as not to interfere with the utility lines. On Everett Street, the existing

utility pole has a 20-foot guide wire, making it possible to add only one new tree between the two existing trees. The new tree is expected to grow to 30- to 40-feet. The landscape designer is in contact with the Tree Warden about the types of trees to be planted in each location. The plan proposes removing one Norway Maple tree in the northeast corner of the property. The landscape plan also includes shrubbery and other vegetation to be planted.

The applicant proposes eight one-bedroom units and six two-bedroom units. Three units will be affordable. All units will be serviced by an elevator and be handicapped-adaptable.

The roof plan shows the placement of solar panels. The solar consultant has designed a 12.88-kW solar array, which will generate almost 15,000 kW of electricity per year, which will connect to the grid.

The applicant has submitted a photometric study which follows the Dark Sky Initiative – all exterior lighting is down-lit and shielded, using warm LED lights.

The second and third floor layouts are different from the fourth and fifth floor layouts. To create more uniform fenestration, they are proposing fiber cement panels which will regularize the fenestration. The windows will have a fiberglass frame with a 5/4" trim. The siding will all be a fiber cement product, with a 50-year warrantee.

Mr. Revilak noted that based on the TDM plan, the applicant proposes to use three TDM measures: charging separately for parking, providing a transit pass subsidy, and installing bicycle charging stations. He asked how much they plan to charge for parking and what type of subsidy they plan to provide. Mike Cabral explained that tenants who do not have a parking space will qualify for a transit pass subsidy upon signing the first year's lease. They have not yet determined how much they will charge for parking or the amount of the subsidy.

Mr. Revilak asked if the pavement for the parking spaces goes all the way to the property line. Mr. Johnson replied that it is not pavement, but pervious interlocking blocks, which do go to the property line. Mr. Revilak asked how the headlights will be prevented from shining into the adjacent property. Mr. Johnson replied that a six-foot stockade fence is proposed for the west side of the property.

Mr. Revilak noted that sheet one of the civil plans still shows the front façade overhanging the property line, but the architectural plans do not. Mr. Johnson explained that the architectural plans are accurate, and a revised civil plan will be submitted.

Mr. Revilak said that he has heard complaints from residents that privately contracted trash and recycling is sometimes picked up early in the morning, disturbing the neighbors. He asked how the development will ensure that trash is not collected before 7:00 am. Mr. Johnson asked if there is a limit to the number of units in a building for the Town to provide the trash pickup. Mr. Revilak said that the Department of Public Works (DPW) would have to answer that question. Mr. Johnson said that if the Town picks up the trash and recycling, he assumes that they will follow the Town's rules. He said that they will check with DPW about whether they will need to contract with a private hauler, and they will report back to the Board.

Mr. Revilak noted that mixed-use developments potentially provide two dimensional bonuses – one is adding a fifth story, and the other is allowing the building to have a 0-foot setback in the front, going all the way to the sidewalk. In order to get those bonuses, the commercial space has to be at least 60% of the ground floor, with at least 80% fenestration along the front commercial façade. His recollection is that the 60% requirement applies to the Gross Floor Area (GFA) of the ground floor, which does not include parking.

Mr. Benson noted that the Board asked for a solar assessment at the last hearing, which is required by the Board's Rules and Regulations, but one is not included with the materials provided to the Board. He also noted that the roof drawing shows the solar system as being considerably less than 50% of the roof area, which is the minimum requirement. The Board needs to see a solar assessment and either a revised plan showing at least 50% of the roof area with solar or an explanation for why that is not possible.

Mr. Benson noted that the TDM plan lists covered bicycle parking and storage as one of the TDM strategies, but covered bicycle parking is required for the project, so it cannot be used as part of the TDM plan, which must include strategies beyond what is already required. He asked for a TDM plan that clearly lists all strategies to be used beyond the building requirements. Mr. Benson also noted that the amount charged for parking must be sufficient to dissuade some tenants

from using the parking. He noted that one apartment complex charges \$175 a month for parking onsite, and \$200 a month for parking in the garage. He would like to know what they plan to charge, so the Board can assess whether it is sufficient to reduce the demand for parking to only five parking spaces for a 14-unit building. He asked if the electric bicycle charger will be located at the corner of the bicycle parking area, as it appears in the plans. Mr. Johnson replied that the location is correct, and said that a three-foot area is provided where a bicycle can be charged. Mr. Benson said that he likes the placement of the accessible parking space. If a second accessible space is needed, the other four spaces will need to be reconfigured, likely resulting in the loss of a spot, which would require approval from the Board.

Mr. Benson asked what sort of screening would be provided for the transformer on the Everett Street side of the property. Mr. Johnson asked if the Board would prefer landscaped screening or a fence. He thinks that landscaping is preferable, and he noted that the landscape plan shows shrubbery on both sides of the transformer. Mr. Benson said that he is concerned that the shrubbery adjacent to the curb cut might be too high and make it difficult for a driver pulling out of the parking area to see the sidewalk in that direction.

Mr. Benson also asked about the plan for snow removal. Mr. Johnson said that the management company will have to work with a snow removal contractor that will actually remove the snow, not simply plow it.

Ms. Korman-Houston said that the square footage listed on the plans for the overall footprint appears to have shrunk by 100 square feet as compared to the prior set of plans, despite the fact that the commercial space has been increased slightly. Mr. Johnson said that he is not exactly sure why that is, except that it is likely due to the way stairways are calculated, not an actual change to the overall size of the building. He also noted that when they removed all the bays overhanging and encroaching on the setbacks, that reduced the overall square footage.

Ms. Korman-Houston noted that the affordability bonus requires that the affordable units make up 22.5% of all units, and she asked if the proposal meets that standard. Mr. Cabral said that the number of units is rounded down, so the three units satisfy the requirement.

Mr. Lau noted that the first floor of the Everett Street façade still has five residential-style windows in the commercial space. He asked if the applicant would be willing to change the style of those windows to look more like a commercial space. He also said that the door facing Broadway is a single door with no sidelights, so it looks like a residential entrance. The residential entrance door facing Everett Street does have sidelights, and he would like to see the front entrance look more like that. Mr. Johnson said they could make those changes.

Mr. Lau said that what they show on the materials board is a little different from what the renderings show. He asked how the corners would be articulated. Mr. Johnson replied that the corners would be mitered.

Mr. Lau asked how the siding would transition to the cement panels next to some of the windows. Mr. Johnson said that they would provide a detail to show the edges of the windows and panels in more detail.

Mr. Lau asked how the recess at the entrance to the commercial space will be lit, and if it will be lit 24/7 or only when the business is open. Mr. Johnson replied that both the commercial and residential entrances will have a ceiling down-light above the entrance, which will be on a timer. The floodlights and down-lights at the garage will be on motion sensors. Mr. Lau also asked if all venting and exhaust will go through the roof, and Mr. Johnson replied that it would.

The Chair noted that the bylaws require that commercial signs be above the entrance doors, which is not possible with the arched design above the door. The current plans appear to have sign bands above the windows on either side of the commercial space.

The Chair said that although the addition of balconies and the change in the railings is an improvement, the proposed plans still present a building that looks large, dark, imposing, generic, and out of context with the neighborhood. She would like to see changes to the design to reference the architecture of the neighborhood and create more of an identity for the building. Such changes could include the corner articulation, the cornices, and the ways the façade pushes in and out, among others. She also said that she is not willing to approve the glass block windows on the Everett Street façade into the interior garage area.

The Chair opened the floor to public comment:

- Joe Pinciario, 74 Oxford Street – His understanding is that to get the bonus fifth floor, the development needs to provide 22.5% affordable housing. The applicant has not met that requirement. They have also provided no data about how the parking will work – how much they will charge for parking and who will be prioritized. Tenants in affordable units will probably be unable to afford to pay for parking.
- Mike Hogan, East Arlington, off Broadway – He asked where the overflow cars will go, given that there are only 5 parking spaces proposed for 14 units. The other cars are likely to park on Broadway or Everett St, which will affect the sightlines of pedestrians, especially children walking to school. Thompson and Gibbs are both nearby, with many children walking, and Ottoson students also walk in the neighborhood to get to the bus stop. A few hundred children walk through that intersection each day. He is also concerned about snow removal. Currently, snow removed from the sidewalks is probably moved to the lawn, but the new, larger building does not have lawn space. Most snow removal companies remove snow from sidewalks and driveways, but they do not remove it from the site entirely, so he is afraid that large mounds of snow will build up on the remaining narrow strips of grass, further impairing sightlines for pedestrians.
- Larry Slotnick, 94 Grafton Street – The mass of this building does not fit with the context of the neighborhood. It is a stand-alone building with no adjacent commercial spaces, so it will not be appealing to most businesses. The changes to the proposed commercial space would all be good ideas for a building surrounded by other buildings with commercial space, but they will not be effective in this location.
- Carl Wagner, Edgehill Road – He agrees with the previous speakers. He does not support the increased density that MBTA Communities forced on Arlington, but he is actually defending that law tonight. The developer is seeking to add a fifth floor in a neighborhood of 2½-story houses. They should provide 4 affordable units to get the extra floor, but they have opted to round down to 3. He asks that the Board require 22.5% affordable units for the fifth-floor bonus, as the law says. This building offends the abutting neighbors, who should not have a five-story building next to them, and the future residents of the building, who will not have nearly enough parking. Having five parking spaces for 14 units breaks the law. He remembers the MBTA Communities process, in which the Board agreed to require one parking space for unit, so they should require it now.
- Aaron Holman, 12 Whittemore Street – He thinks that the fifth-floor bonus should be denied on the basis of either 60% ground-floor commercial space or at least 22.5% affordable units. The parking reduction should also be denied. The applicant should come up with a proposal that meets all zoning requirements, does not have a fifth floor, provides at least 0.5 parking spaces per unit, and better meets the size and scale of the neighborhood. The Board has a great deal of discretion, and he is concerned by the fact that the Board is looking for ways to approve something which should not be permitted.
- Susan Silva, Arlington Heights – She wants to know which of the proposed parking spaces are designated accessible, because they seem too tight. She also wants to know if there are any accessible parking spaces designated for the commercial space. Depending on the type of commercial space, they may need loading and unloading services, which will block the crosswalk if done on the street.
- Joanne Cullinane, 69 Midland Road – She is concerned about the scale of the project and the fact that it does not fit with the neighborhood. She also has safety concerns, as many others have mentioned. Under the law, the developer does not meet the 22.5% affordability requirement for a bonus fifth floor. 22.5% of 14 is 3.15; 3 out of 14 units is only 21.4%. The developer has chosen to use the provisions of the MBTA Communities overlay, versus Arlington's inclusionary zoning, and they should not be allowed to mix and match different parts of the bylaw at will.
- Rebecca Gruber, 214 Pleasant Street – When the MBTA Communities overlay zoning was passed, this was the type of project that she hoped would be built. There are very few lots in Arlington that are available to build on. This project would result in several small somewhat affordable units. She hopes that the developer can find a way to meet the requirements and build this project. A building like this, with an elevator and small units, would be an attractive option for people who want to downsize and remain local.
- Jason Haas, 105 Everett Street – His property abuts 126 Broadway. He is concerned that the shadow study indicates that several abutters will be in significant shadow, meaning they will lose the ability to install solar energy on their homes. At the last hearing, there was discussion of upgrading the stormwater system, which has not been discussed tonight. A cistern system will overflow quickly. He is concerned about lights from headlights

shining into neighboring houses. A lot of the MBTA Communities zoning is distributed among two-family houses, which could all be turned into unattractive shoeboxes.

- Adam Lane, 77 Grafton Street – He has concerns about the mass of the building, but he thinks the mass would be easier to take if the ground floor were better articulated. He is also concerned that it will be hard to support a commercial space in this location. It needs more street appeal. He finds both entrances to be clumsy. The current design will also lead to confusing signage.
- Claudia Hughes, Webster Street – This proposal is a money-grab, by people who just want to make money off the backs of the residents of Arlington. The MBTA Communities overlay was pushed onto Arlington and should not have been accepted. She noted that residents of more affluent neighborhoods of Arlington would not like to have a five-story building built in the middle of their neighborhood.
- Jack Ignasio, 73 Everett Street – He doesn't see a plan for how the trash will be dealt with. Will every unit have a recycle bin and a trash bin? He is also concerned about snow removal.

Seeing no one else who wished to speak, the Chair closed the floor.

The Chair clarified that snow removal is typically a special condition in any approval by the Board, so it will be addressed in the decision.

Mr. Revilak addressed the issue of the affordability requirement for a bonus floor. Section 8.2 of the zoning bylaw, which includes affordability requirements, includes details about how to calculate the number of affordable units required. Any multi-family development of six or more units requires 15% affordability. To calculate that, the total number of residential units is multiplied by 0.15, and the result is rounded. The bylaw specifies that fractional results of 0.5 or greater are rounded up, and anything lower is rounded down.

Mr. Benson agreed with Mr. Revilak's reading. The same method is applied to the 22.5% requirement for a bonus floor in the Mass Ave/Broadway Multi-Family Overlay district. 22.5% of 14 units is 3.15, which is then rounded down to 3. Having three affordable units meets the requirement for a bonus floor according to the bylaw. This way of interpreting affordability requirements has been used for years, so the Board is not treating this project differently from others. He also noted that this project is coming before the Board for Site Plan Review, not a Special Permit. A Special Permit gives the Board much more authority to say no or impose multiple conditions on a project. Under Site Plan Review, an applicant has the right to build a project if they meet all the requirements of the zoning bylaw, so the Board has much less discretion. The Board does have some discretion regarding issues like parking.

Ms. Korman-Houston agreed with Mr. Benson and Mr. Revilak. The bylaw regarding affordability has been applied in a consistent manner for quite some time. Mr. Lau also agreed.

The Chair asked the Board to address the second issue relating to a bonus – including at least 60% commercial space on the ground floor allows the project to have a 0-foot front setback. Mr. Revilak said that his understanding is that the percentage calculation is based on the Gross Floor Area (GFA) of the first floor, which does not include parking. In this case, that is 1,817 square feet. The proposed commercial space is approximately 1,400 square feet, which is 77% of the GFA, so the project meets the 60% requirement.

Mr. Benson disagreed with Mr. Revilak's analysis. The zoning bylaw says that the project can have a 0-foot front setback if the ground floor at street level will be at least 60% occupied by specific commercial uses, but the bylaw does not specify GFA in this case, nor does it define "ground floor." Most dictionaries define "ground floor" as "the floor of a building most nearly on a level with the ground," which does not address the question of whether that would include the parking area. In the Massachusetts Building Code, building area is defined as "the area included within surrounding exterior walls (or exterior walls and fire walls) exclusive of vent shafts and courts. Areas of the building not provided with surrounding walls shall be included in the building area if such areas are included within the horizontal projection of the roof or floor above." (780 CMR 502.1). Most of the parking area of this project is underneath the second floor, so it should be included in the calculation of the square footage of the ground floor. As a result, they cannot build all the way up to the sidewalk along Broadway unless the first-floor commercial space takes up at least 60% of the entire footprint of the building, including the parking areas, which it does not do as currently proposed. If the interpretation of the requirement uses GFA as the basis for the 60% calculation, developers will be incentivized to add more parking on the

ground floor, and the GFA could be reduced to the point that 60% of it would be too small to be a useful commercial space.

The Chair agreed with Mr. Benson's analysis. She noted that a similar issue came up with a project on Mass Ave about a year prior, and the majority of the Board agreed with Mr. Benson's interpretation at that time.

Ms. Korman-Houston said that her recollection of the intent of the MBTA Communities Working Group is in agreement with Mr. Revilak's interpretation.

Mr. Lau agreed with Mr. Revilak. The intent of the MBTA Communities Working Group was to require that 60% of occupied space be commercial in order to get a bonus. He noted that in the time he's been on the Board, they've always calculated the percentage of commercial space on the ground floor based on occupied space. He wants to encourage more commercial space and not more parking.

Mr. Benson noted that this is the first project under the MBTA Communities overlay in which the Board has had to consider the 60% commercial requirement for a bonus, so they cannot apply earlier decisions based on different parts of the bylaw. He also thinks that it is not a good idea to base decisions on the intent of the Working Group, because the Board held public hearings and ultimately made a number of changes to the Working Group's proposal.

The Chair agreed with Mr. Benson. She said that the Board has previously discussed what constitutes the ground floor, and she believes that they have voted to include parking and service areas.

Ms. Korman-Houston agreed with Mr. Revilak and Mr. Lau. The goal was to define the ground floor as occupiable area, and to require at least 60% of occupiable area to be commercial for the 0-foot setback bonus.

Mr. Benson noted that sometimes Board approval requires four votes, and sometimes it only requires three. Site Plan Review only requires three votes for approval.

The Chair listed items for next steps:

- Discrepancy between the architectural plans and the civil plans regarding the building overhang
- Solar must be at least 50% of the roof area, and a solar assessment must be provided
- Determination of tree species with Tree Warden
- Revised TDM plan with clearly specified implementation items, including how much will be charged for parking, and what sort of transit subsidies will be provided
- Building façade – designed in such a way that it is contextual, the massing is broken down, the heaviness is alleviated, glass block windows are removed
- Detail for window trim condition
- More detail for screening of transformer on Everett Street
- Height of first floor to be appropriate for commercial use
- Marketing plan for commercial space – the fifth-floor and 0-setback bonus requires specific types of business uses
- Coloration of the building is too dark
- More detail about trash/recycling removal procedures – whether Town-provided or not
- More detail about snow removal procedures

Mr. Revilak noted that in Section 5.8 of the Zoning Bylaw, regarding the Multi-Family Housing Overlay districts, applicants are encouraged to provide fewer than 1 parking space per dwelling with a TDM plan. The reduction under a TDM plan can be up to 75%. This project requests a 64% reduction, which is significant. Rather than simply subsidizing transit passes, he would like to see the applicant provide one LinkPass (for unlimited travel on both bus and subway) per month to each apartment that does not rent a parking space, for the duration of their tenancy.

The Board asked for a motion to continue the public hearing for Docket 3862, 126 Broadway, to November 17, 2026. Ms. Korman-Houston so moved, Mr. Benson seconded, and the Board voted unanimously in favor.

The Chair moved to **Agenda Item 3 – Public Hearing: Docket #3857, 225 Broadway (continued from September 8, 2025).**

Ms. Ricker explained that the applicant proposes to demolish an existing two-family dwelling and construct a multi-family dwelling with four (4) units on the property located at 225 Broadway. Materials submitted include architectural plans and drawings, landscape plan, application for Site Plan Review, dimensional and parking information, impact statement, surveys, and LEED checklist. She also explained that the applicant has changed architects on this project since the Board first heard this proposal.

Architect Will Chalfant, from KDI Architects, presented the revised plans for this project. He said that the setbacks, height, and vehicle and bicycle parking are in compliance with the zoning bylaw. The previous version of the plans had parking in the front, but the revised plans have moved the parking area to the back, with a driveway coming from the front. The parking spaces are not within the footprint of the building. They plan to use pervious pavers in the parking spaces, and asphalt in the driveway. The parking area includes two EV chargers, each of which can handle two vehicles, so charging is available to all four parking spaces. Trash and recycling bins are to be stored at the back of the building. Each unit will have private outdoor space via balconies and decks. Unit 1 is fully accessible. They propose a limited-access lift connecting the basement and ground floor, which are both part of Unit 1. All four units are approximately 1,700 square feet. Three are three-bedroom units, and the fourth is a two-bedroom unit. They have included a landscape plan that will provide visual interest and color year-round. The parking area will be shielded by both vegetation and a six-foot fence. In addition to two bicycle parking spaces per unit, they have provided visitor bicycle parking in the front of the building. The total square footage of the building, including the basement level, is approximately 8,300 square feet. Unit 1 has two bedrooms and a family room on the basement level, and living space, the primary bedroom, and a porch on the ground level. The front porch is raised from street level. The second floor is the only single-story apartment in the project. It is served by two staircases. The third and fourth floors are each split into two two-level units. They intend to put condensers for HVAC on the roof, and they've allocated space on the roof for solar. The massing is broken down with trim articulation, material changes, and color changes. The ground floor is comprised of masonry and brick; the second and third floors are cementitious clapboard; and the fourth floor is cementitious panel. It is not possible to miter cementitious clapboard well, so they are using large 11¼" trim boards. They are proposing six over six black windows. The back portion of the upper floors overhang the circulation space for parking. They have designed the front façade with balconies to resemble a traditional triple-decker. The building is taller than the neighboring buildings by about 13 feet, and they feel it is an appropriate scale for this section of Broadway.

The Chair said that she appreciates the architectural detailing on the first three floors, but she does not think that the fourth floor works as well. She noted that Mr. Chalfant has done interesting work elsewhere bringing together traditional architectural details that fit well in the neighborhood with more modern architecture, and she would like to see more of that here. She also noted that the zoning bylaw requires a stepback on the fourth floor, which will also help with the massing.

The Chair asked about the use of a lift versus an elevator. Mr. Chalfant said that a full-fledged elevator is not feasible in this context. The entrance to Unit 1 is at grade, and the main floor of the unit is elevated three feet. The lift will enable a wheelchair to enter and use the lift to either go up three feet to the main floor or down to the basement. The appearance of the exterior of the lift is similar to a closet door. The Chair said that a lift requires variances from the Massachusetts Architectural Access Board (MAAB), which is not always easy to obtain. She recommended that Mr. Chalfant speak to the Director of Inspectional Services, who has been very consistent in applying accessibility requirements to construction in Arlington. Mr. Chalfant said that his firm has applied for a variance from the MAAB many times. They have installed similar lifts in other four- to six-unit buildings, and he believes that a lift is appropriate in this situation. He also noted that there will be five feet adjacent to the far-right parking space which can be used to convert it to an accessible space without structural changes.

Mr. Lau said that this proposal is more contextual than the prior plans, and he appreciates that many of the Board's previous comments have already been incorporated. He also dislikes the fourth floor. He recommended eliminating or reducing the parapet and cornice to minimize the transition. The top looks heavy because it is a darker color than the lower three floors.

Ms. Korman-Houston said that the long-term bicycle parking must be covered, so the proposed parking is not compliant. She also expressed concern that it would be difficult to get bicycles in and out of the spaces provided as they are all behind cars.

Ms. Korman-Houston said that she believes that the front porch extends into the setback, and she asked the applicant to recheck the setback and revise the plan for the porch if necessary.

Ms. Korman-Houston asked how the buffer between the driveway and the property line shown on the site plan would be defined. Mr. Chalfant said that most of the buffer will be a fence, which will be about a foot wide. There will not be space for landscaping, so the remainder of the space will likely be gravel.

Ms. Korman-Houston asked about the plans for managing snow. Mr. Chalfant said that one option is that a private snow company will be contracted to remove the snow. But the driveway and parking constitute a small enough area that he thinks that it should be possible to handle snow onsite. There is space to the left of the parking area, on the northwest side of the property, where snow could be piled. He said that he would check with the landscape architect to confirm that the plantings in that area are hardy enough to handle snow being piled on top of them.

Ms. Korman-Houston asked if the building will have sprinklers. Mr. Chalfant replied that it will and that there is a sprinkler under the front staircase.

Ms. Korman-Houston said that the Board requires a solar assessment, which has not yet been provided. She also noted that solar panels on the drawing of the roof do not appear to cover 50% of the roof area, which is the requirement. Mr. Benson directed Mr. Chalfant to the Board's Rules and Regulations for clarification of the solar requirements. He noted that it is not sufficient for the roof to be solar-ready; it must actually have solar installed.

Mr. Benson asked for clarification on how Unit 1 is accessible, since the lift is not shown on the basement level. He asked if there was a separate entrance for the basement. Mr. Chalfant replied that the lift has stops at the lobby, on the first floor, and in the basement, but it is not shown on the basement plans. Mr. Benson asked that the plans be modified.

Mr. Benson noted that an accessible parking space has to be eleven feet wide with a five-foot aisle next to it. He does not think that any of the proposed parking spaces can be modified to meet that requirement without removing a space. Mr. Chalfant replied that his understanding is that the space only needs to be eight feet wide with a five-foot aisle next to it. He said that he would find the applicable code section.

Mr. Benson said that he is also concerned about the color of the fourth floor in the neighborhood context.

Mr. Revilak asked the width of the drive aisle behind the parking spaces. Mr. Chalfant replied that it is 20 feet wide. Mr. Revilak said that the requirement is that it be 24 feet wide. Mr. Chalfant said that he is aware of the requirement, but he thinks that it is unnecessarily wide for urban living. Boston, Somerville, and Cambridge only require 20 feet, and that is sufficient for most vehicles. They can extend the drive aisle, but it would mean losing the planting strip at the rear of the parking area. Mr. Revilak asked if the vehicles would have to back out onto the street, and Mr. Chalfant said that there is enough space for cars to make a three-point turn and pull out forward. He said that he would provide a drawing showing the turning radii.

Mr. Revilak asked if there will be a fence behind the parking area to screen headlights from the adjacent property. Mr. Chalfant replied that three sides of the property will have fencing, all except the front.

Mr. Revilak said that Section 6.1.12.C of the zoning bylaw requires that long-term bicycle parking be enclosed to protect the bicycles from the elements and be secure. The requirement is often met with a bicycle room or lockers, but outdoor parking spaces at the end of each vehicle parking space are not sufficient. Mr. Chalfant asked if any of the long-term bicycle parking can be mounted rather than ground level. Mr. Revilak replied that the requirement is that the bicycle not have to be manually lifted, but two-level racks with mechanical assists to lift the bike are acceptable.

The Chair opened the floor to public comment:

- Mike Hogan, Arlington police officer – He lives in the neighborhood. This proposal does not fit with the neighborhood. The neighbors will all be frustrated with this development and will ultimately sell their properties. There is no way that the tenants of this building will only have four cars. There is a bus stop directly in front of the property, which will prevent parking there. On either side, there are elderly residents who currently do not have to compete with neighbors for parking. The new residents will start parking in front of the neighbors' houses and make it difficult for those elderly residents. The intersection of Broadway and Wyman

Street is one of the busiest and most dangerous intersections in Arlington. The proposed building will directly affect sightlines at that intersection. A four-story building is completely out of character with the neighborhood. It will completely change the area and is unfair to the neighborhood.

- Claudia Hughes, Webster Street – Her great-grandfather built the house next door, and her 100-year-old uncle now lives there. People like the neighborhood, and this proposal is detrimental to the happiness of the neighborhood. It doesn't look like any other houses in the neighborhood, and a fourth floor is unnecessary and detracts from the neighbors' sunlight. Parking in that neighborhood is already difficult. This property should have more than four parking spaces. Building a house like this indicates that the owner doesn't care about the neighborhood.
- Katherine MacFarland, 227 Broadway – She agrees with the concerns already raised about parking. She is also concerned about shadows. The houses are already very close together, and having a four-story building next door will likely take away all sunlight from her yard. She would like to know if a shade study has been done. She is also concerned about venting systems for the house. She would like to know if it will be on the roof or on the sides. She is also concerned about trash and recycling services. If the services will be provided by the Town, that will require eight barrels, and there is not enough room in the front of the house for eight barrels to be left along the curb for collection every week.

Seeing no one else who wished to speak, the Chair closed public comment.

The Chair noted that one of the Board's conditions for all developments is that all venting go through the roof, so nothing is vented to the sides. The Board also requires that trash and recycling removal be addressed, including sufficient space for barrels or dumpsters. She asked that Mr. Chalfant confirm that there is enough space to accommodate eight barrels. She also asked the applicant to provide a shadow study. Ms. Korman-Houston said that it is helpful if the shadow study can show both existing shadows and proposed shadows.

The Chair asked Ms. Ricker to consult with the Director of Inspectional Services regarding the proposed strategy of using a lift to make Unit 1 accessible, as well as the required variance for the lift.

Mr. Benson noted that Section 5.3.9 of the zoning bylaw says that porches that encroach into the setback cannot be more than 25 square feet. He noted that the drawings do not include measurements for the porch. He also noted that the required upper-story stepback must be measured from the principal property line.

The Chair summarized items for the applicant to address:

- Clarify and show on drawings that the lift extends to the basement.
- Clarify how a parking space could be converted into an accessible space.
- Consider articulation and contextualization of the fourth floor so that it better fits the neighborhood and matches the first three stories, including palate and materials.
- Provide a solar study and plans for a minimum of 50% roof coverage, or an explanation for why the project qualifies for an exemption.
- Provide enclosed, secure long-term bicycle parking, per Section 6.1.12.C.
- Identify whether the front porch encroaches into the setback, and if so, ensure that the size of the porch is in alignment with the zoning bylaw.
- Determine whether snow removal will be handled on site or privately contracted. If the former, identify location for snow removal and storage on-site.
- Determine whether trash and recycling services will be provided by the Town or privately contracted. If the former, identify bin location and ensure adequate space at the front of the lot for pick-up. If the latter, determine location of and access to dumpsters.
- Ensure that no venting is included on any vertical facades, and all venting goes through the roof.
- Review the drive aisle size in alignment with the bylaw's requirements.

Mr. Benson clarified that for Site Plan Review under MBTA Communities, if a proposal meets the requirements of the zoning bylaw, the Board cannot say no. The bylaw requires a minimum of one parking space per unit, so the Board

cannot require more parking than four spaces for a four-unit building. The bylaw also allows buildings on Broadway in the MBTA Communities overlay to be four stories, so the Board cannot require the applicant to reduce the height of the building. Mr. Revilak noted that the requirement of one parking space per dwelling unit is not unique to MBTA Communities; it applies across Arlington to all residential development.

The Chair asked for a motion to continue the public hearing for Docket 3857, 225 Broadway, to November 17, 2025. Mr. Lau so moved, Mr. Benson seconded, and the Board voted unanimously in favor.

The Chair moved to **Agenda Item 4 – Comprehensive Plan Presentation.**

Ms. Ricker provided an update to the Board on the Comprehensive Plan process. Thus far, the Advisory Committee and consultant Stantec have completed Project Initiation, Inventory Analysis, and Community Visioning. They are currently in the Plan Development phase. Using the data from public outreach, the Committee has drafted a vision statement and topic area goals and is currently developing strategies to meet the goals. The strategies will be workshopped at the next public event, to be held on Thursday, October 30, at 6:00 pm, in the high school cafeteria.

Public outreach has been extensive. Engagement includes:

- 532 responses to visioning survey
- 618 interactive map contributions from 209 contributors
- 485 responses to two “quick polls”
- 3,983 visitors to website with 946 contributions
- Website activity peaked in mid-May, early July, early August, and early October, coinciding with press releases and other community outreach.

Public outreach events include:

- farmer’s market
- National Night Out
- Jason Russell House beer garden
- Reservoir beer garden
- Town Day
- Rockin’ Robbins and Robbins movie night
- Silk Street block party
- Porchfest

DPCD developed a quick written survey for use at community events, and over 100 have been received, including some provided through an interpreter.

The Comprehensive Plan will provide long-range policy direction. DPCD has planned several focus groups. These focus groups are each centered on a specific policy area, and community members working in those areas have been invited.

The policy areas include:

- Sustainability and Resilience – August 13
- Housing – September 17
- Transportation – September 30
- Historic and Cultural Resources – October 15
- Economic Development – October 22

Highlights of existing conditions:

- Over the last 10 years, the number of housing units permitted annually has trended downward, although the population has increased.
- The population is getting older.
- Median household income has increased faster than inflation, but Arlington still has housing cost-burdened residents – approximately one-third of renters and one-fifth of homeowners.
- The median home price in 2024 was just under \$1 million, which is an increase of 56% since 2018.
- Median rent is \$2,043, which is an increase of 18% since 2019.

- Health care and social services is the largest employment sector in Arlington.
- Most residents work outside Arlington.
- Working from home has remained high since the pandemic.

Using the data collected through mid-summer, Stantec identified the top priorities for community members, and they have used that data to draft an updated plan vision, which was workshopped with the Advisory Committee.

DRAFT VISION: Arlington will be a welcoming place with attainable housing options, flourishing business districts, and a strong sense of community. Key features will include:

- A variety of attainable housing options for all income levels and stages of life
- Thriving business districts with a range of job opportunities
- Inviting, safe streets for all users that link neighborhoods
- Natural systems and open spaces in ecological balance
- Stewardship and promotion of our historic heritage
- Cultural and recreational resources that provide shared experiences
- New development and redevelopment that enhances sustainability and resilience
- A shared interest in civic engagement and the Town's fiscal health

The Committee has also begun to draft goals and policies, which will lead to the development of strategies. Of particular interest to the Board are the areas of Land Use, Housing, and Economic Development.

- **Land Use Draft Goals and Policies:**
 - Increase the amount and variety of residential and non-residential development opportunities
 - Encourage development that enhances Arlington's natural resources, built environment, and sustainability
 - Attract development that supports and expands the economic, cultural, and civic vibrancy of Arlington's commercial areas
- **Housing Draft Goals and Policies:**
 - Encourage mixed-use development that includes attainable housing options at all income levels, especially near transit and in established commercial areas
 - Provide a variety of housing options for a range of incomes, ages, family sizes, and needs
 - Enhance the fabric of Arlington's residential neighborhoods while allowing new housing and amenities
 - Encourage sustainable new construction and renovation of existing structures
- **Economic Development Draft Goals and Policies:**
 - Improve regulatory processes to benefit small, independent businesses
 - Increase the buildout potential and value of commercial and industrial properties
 - Promote Arlington's historic and cultural assets to support visitor-based economic development
 - Improve the customer experience through streetscape improvements, wayfinding, parking, and access upgrades
 - Create and support organizational capacity related to economic development

Next steps:

- Public meeting to discuss strategies to meet goals – October 30. Each topic area will have a table, with an open house, so people can gravitate to the topics they are interested in.
- Plan Writing – The plan will be drafted by Stantec, reviewed by DPCD, and provided to AmpUP Advisory Committee for review and comment.
- Public Meeting to present draft plan – January.
- Stantec will edit the plan based on feedback from Committee comment and review as well as public input from the draft plan presentation – February.
- Final draft of plan to present to the ARB – March.

- The goal is to finalize Comprehensive Plan by 2026 Annual Town Meeting.

Mr. Revilak said that 2015 Annual Town Meeting, the Redevelopment submitted a warrant article, which was approved by the Select Board, to support the 2015 Master Plan. The Board should discuss whether to submit a similar article for 2026 Town Meeting, and what the process would be. Ms. Ricker said that she will coordinate with the Select Board, but she is more concerned with making sure that the Comprehensive Plan process is thorough and done well rather than meeting a particular deadline, such as warrant article submission. It is not necessary for the Comprehensive Plan endorsed by the Select Board and Town Meeting, so it can wait for 2027 if necessary.

Mr. Benson said that the Board has had minimal input into the process. He would like to have the plan presented to the Board for review and comment before it is presented to the public. The Chair agreed. She said that early involvement from the Board in the draft process can lead to a better outcome and less need to rework the plan down the line.

Mr. Lau expressed concern about bringing the Comprehensive Plan to 2026 Town Meeting, partly because a lot is already planned, and partly because it may not pass the first time, and it may be necessary to make further changes and bring it to a second Town Meeting.

The Chair moved to **Agenda Item 5 – Open Forum.**

The Chair opened the floor.

- Jason Haas, 105 Everett Street – He is concerned that the commercial space being proposed for 126 Broadway is not big enough. If multiple developers propose similar mixed-use buildings, it will result in a corridor of empty storefronts. He asked that the Board reconsider the application of the 60% rule for commercial space. If we allow developers to claim bonuses by building tiny commercial spaces, it will have a negative impact on how Broadway looks and feels for decades to come.

Seeing no one else who wished to speak, she closed open forum.

The Chair moved to **Agenda Item 6 – New Business.**

Mr. Revilak noted that the resolution to support the 2015 Master Plan was Article 46 at 2015 Annual Town Meeting, and it was adopted by a vote of 136-41.

The Chair asked for a motion to adjourn. Mr. Lau so moved, and Mr. Benson seconded. The Board voted and approved unanimously.

Meeting **Adjourned at 10:25 pm.**

Documents used:

Agenda Item 1	Draft Redevelopment Board Minutes – 10/6/25
Agenda Item 2	126 Broadway - application & impact statement - SPR
	126 Broadway - architectural plans - UPDATED 10.13.2025
	126 Broadway - color elevations - 10.13.25
	126 Broadway - plot plans - legal size
	126 Broadway - existing conditions photos - 07.08.25
	126 Broadway - LEED Checklist - 08.07.2025
	126 Broadway - shadow study - 10.13.25
	126 Broadway - Photometrics - 09.18.2025
	126 Broadway - Civil Engineering Plans - 07.09.2025
	126 Broadway - Stormwater Narrative - 07.11.2025
	126 Broadway - TDM Plan - 10.16.2025
	126 Broadway - letter re bonus floor - 08.21.25
	126 Broadway - Landscape Plan Narrative - 10.20.2025

Updated SPR memo Docket 3862 126 Broadway - 10-20-2025

Agenda Item 3 225 Broadway Site Plan Review Application 2025-06-02
225 Broadway ARB Impact Statement
225 Broadway Plans and Drawings Updated 2025-10-02
225 Broadway LEED checklist 2025-06-13
225 Broadway Survey
SPR memo Docket 3857 225 Broadway 10-17-2025

Correspondence	126 Broadway:	126 & 225 Broadway:
	• Newton, S. - 8/11/25 • Tower, B. - 9/14/25 • Fanale, K. - 10/20/25 • Scheffler, S. - 10/20/25 • Cullinane, J. - 10/20/25	• Seltzer, D. - 10/19/25

DRAFT



Town of Arlington, Massachusetts

Public Hearing: Docket #3866, 18 Grafton St (continued from September 8)

Summary:

7:40 pm

Notice is herewith given that an application has been filed on August 14, 2025, by Albert Azatyants, SA Development Corp, 200F Main St, Box 352, Stoneham, MA 02180, to open Docket #3866 in accordance with the provisions of the Town of Arlington Zoning Bylaw Section 5.9.3, Site Plan Review. The applicant proposes to demolish an existing single-family dwelling and construct a six-unit residential building on the property located at 18 Grafton Street, Arlington, MA, in the R2 Residential District and Neighborhood Multi-Family Housing Overlay District.

- DPCD staff will be provided 5 minutes for an overview of their Public Hearing Memorandum.
- Applicant will be provided 10 minutes for an introductory presentation.
- Members of the public will be provided time to comment.
- Board members will discuss Docket and may vote.

ATTACHMENTS:

Type	File Name	Description
Application	18_Grafton_St_-_Site_Plan_Review_Application_-_8-8-25.pdf	18 Grafton St - Site Plan Review Application - 8-8-25
Application	18_Grafton_St_-_Dimensional_Parking_Info_-_10-2-25.pdf	18 Grafton St - Dimensional & Parking Info - 10-2-25
Application	18_Grafton_St_-_Impact_Statement_-_10-2-25.pdf	18 Grafton St - Impact Statement - 10-2-25
Application	18_Grafton_St_-_Plans_Drawings_-_10-1-25.pdf	18 Grafton St - Plans & Drawings - 10-1-25
Application	18_Grafton_St_-_Landscape_Plan_-_10-6-25.pdf	18 Grafton St - Landscape Plan - 10-6-25
Application	18_Grafton_St_-_LEED_Checklist_-_8-11-25.pdf	18 Grafton St - LEED Checklist - 8-11-25
Application	18_Grafton_St_-_Civil_Set_Revised_-_9-28-25.pdf	18 Grafton St - Civil Set Revised - 9-28-25
Application	18_Grafton_St_-_Sustainability_Analysis_-_8-6-25.pdf	18 Grafton St - Sustainability Analysis - 8-6-25
Application	18_Grafton_St_-_Stormwater_report_-_7-21-25.pdf	18 Grafton St - Stormwater report - 7-21-25
Application	Docket_3866_18_Grafton_St_-_SPR_Legal_Notice_8-21_8-28.pdf	Docket 3866 18 Grafton St - SPR Legal Notice 8-21, 8-28
Application	SPR_memo_Docket_3866_18_Grafton_St_-_11-05-2025.pdf	SPR memo Docket 3866 18 Grafton St - 11-05-2025

2025 AUG 13 AM 10:41

TOWN CLERK
ARLINGTON, MA. 02476

18 Grafton St

DOCKET 3866

REQUIRED SUBMITTALS CHECKLIST

2025 AUG 14 AM 9:07

Submit checklist with application. One electronic copy of your application is required; print materials may be requested.



Application Cover Sheet (project and property information, applicant information)



Dimensional and Parking Information Form (see attached)



Impact statement

- Respond to Environmental Design Review (Section 3.4) criteria on pages 6-7 of this packet.
- Include summary of neighborhood outreach, if held or planned.



Drawing and photographs of existing conditions

- Identify boundaries of the development parcel and illustrate the existing conditions on that parcel, adjacent streets, and lots abutting or directly facing the development parcel across streets.
- Photographs showing conditions on the development parcel at the time of application and showing structures on abutting lots.



Site plan of proposal. Must include:

- Zoning boundaries, if any, and parcel boundaries;
- Setbacks from property lines;
- Site access/egress points;
- Circulation routes for pedestrians, bicyclists, passenger vehicles, and service/delivery vehicles;
- New buildings and existing buildings to remain on the development parcel, clearly showing points of entry/exit;
- Other major site features within the parcel or along its perimeter, including but not limited to trees, fences, retaining walls, landscaped screens, utility boxes, and light fixtures;
- Spot grades or site topography and finish floor level;
- Open space provided on the site;
- Any existing or proposed easements or rights of way;
- Any wetlands or wetland resource areas.



Drawings of proposed structure/sample materials

- Schematic drawings of each interior floor of each proposed building, including basements.
- Schematic drawings of the roof surface(s), identifying roof materials, mechanical equipment, screening devices, green roofs, solar arrays, usable outdoor terraces, and parapets.
- Elevations of each exterior façade of each building, identifying floor levels, materials, colors, and appurtenances such as mechanical vents and light fixtures.
- Drawings from one or more prominent public vantage point illustrating how the proposed project will appear within the context of its surroundings.
- Physical sample façade materials and color samples.
- Lighting plan and fixtures if not provided on site or landscaping plan.



Vehicle, Bicycle, and Service Vehicle Plans

- Parking and loading plans, including all vehicle and bicycle parking facilities located on the parcel or within a structure, showing dimensions of spaces, driveways, access aisles, and access/egress points. Include line-of-sight and turning radius along with length and type of delivery truck.

-  **Sustainable Building and Site Design Elements**

 - A solar energy systems assessment per Section 6.4, which must include:
 - An analysis for solar energy system(s) for the site detailing layout and annual production;
 - The maximum feasible solar zone area of all structures; and,
 - Drawings showing the solar energy system you propose, with a narrative describing the system, the reasons the system was chosen, and how the system meets the requirements of Section 6.4; or
 - A detailed explanation of why the project meets an exemption of Section 6.4.2.
 - LEED checklist and narrative per EDR criterion L. Applicants **MUST** submit a current LEED checklist, appropriate to the type of development, annotated with narrative description that indicates how the LEED performance objectives will be incorporated into the project. LEED checklists may be found at <https://www.usgbc.org/resources>, under "RATING SYSTEM."

Schematic drawing(s) illustrating and clearly labels all landscape features, including hardscape materials, permeable areas, plant species, and light fixtures.

Describe the number, locations, and sizes of residential units, and of affordable units if any. All affordable units must meet the State's standard for inclusion on the Arlington Subsidized Housing Inventory. Describe the number, locations, and sizes of commercial units, if any. Indicate if units are rental or ownership.

(for stormwater management during construction for projects with new construction)

(The fee is \$0.20 per square foot of new construction, or a minimum fee of \$500. See Rule 12 of the [ARB Rules and Regulations](#) for more information.)

Date: _____

COVER SHEET

Application for Site Plan Review

PROPERTY AND PROJECT INFORMATION

- Property Address 18 Grafton st
Assessors Block Plan, Block, Lot No. _____ Zoning District NMF
- Deed recorded in the Registry of deeds, Book 84307, Page 116
or- registered in Land Registration Office, Cert. No. _____, in Book 189, Page 42.
- Present Use of Property (include # of dwelling units, if any)
Single family dwelling
- Proposed Use of Property (include # of dwelling units, if any)
4 Residential Dwelling units

APPLICANT INFORMATION

- Applicant:** Identify the person or organization requesting the Site Plan Review.
Name of Applicant(s) Albert Azatyants
Organization SA Development Corp
Address 200F Main street Box 352, Stoneham, MA, 02180
Street City, State, Zip
Phone 6178615622 Email albert@unionsqcapital.com
- Applicant Interest:** The applicant must have a legal interest in the subject property.
☒ Property owner ☐ Purchaser by land contract
☐ Purchaser by option or purchase agreement ☐ Lessee/tenant
- Property Owner:** Identify the person or organization that owns the subject property.
☐ Check here if applicant is also the property owner
Name Albert Azatyants Title Manager
Organization Arlington 18 Grafton Street LLC Phone 6178615622
Address 200F Main street Box 352, Stoneham, MA, 02180
Street City, State, Zip
Phone 6178615622 Email albert@unionsqcapital.com

4. **Representative:** Identify any person representing the property owner or applicant in this matter.

Name Trevor O'leary Title Project Manager
Organization MGD Plus LLC Phone 7816353456
Address 411 lexington st, Aurbundale, MA, 02466
Street City, State, Zip
Phone 7816353456 Email Toleary@mgdplus.com

5. Site Plan Review applied for in accordance with the following Zoning Bylaw section(s):

5.9 Multi-Family Housing overlay districts established under massachusetts general laws chapter 40A, § 3A

section(s) title(s)

6. List any waivers or bonuses being requested and the Zoning Bylaw section(s) which refer to the minimum or maximum requirements from which you are seeking relief:

5.9.4(10) Dimensional Requirements

section(s) title(s)

7. Please attach a statement that describes your project and provide any additional information that may aid the ARB in understanding the approval you request. Include any reasons that you feel you should be granted the requested approval.

(In the statement below, check the options that apply)

The applicant states that Albert Azatyants is the owner ☒ or occupant ☐ or purchaser under agreement ☐
of the property in Arlington located at 18 Grafton
which is the subject of this application; and that unfavorable action ☐ or no unfavorable action ☒ has been taken by
the Zoning Board of Appeals on a similar application regarding this property within the last two years. The applicant
expressly agrees to comply with any and all conditions and qualifications imposed upon this permission, either by the
Zoning Bylaw or by the Redevelopment Board, should the site plan be approved.

Signature of Applicant(s):

200F Main street Box 352 6178615622
Address Phone

DIMENSIONAL AND PARKING INFORMATION

Property Location: 18 Grafton st Zoning District: NMF

Applicant: _____ Address: _____

Present Use/Occupancy: No. of Dwelling Units and sizes: Residential: Single family dwelling Uses and their gross square feet: _____

Proposed Use/Occupancy: No. of Dwelling Units and sizes: Residential : 6 units Uses and their gross square feet: RESIDENTIAL 4960 SF

	Present Conditions	Proposed Conditions	Min. or Max. Req'd by Zoning for Proposed Use	
Lot Size	4804	4804	min.	N/A
Frontage	N/A	N/A	min.	N/A
Floor Area Ratio ¹	N/A	N/A	max.	N/A
Lot Coverage (%), where applicable	N/A	N/A	max.	N/A
Lot Area per Dwelling Unit (sf)	N/A	N/A	min.	N/A
Front Yard Depth (feet)	12.7	10.5	min.	15
Side Yard Width (feet) right side	7.1	5	min.	5 (SUM OF 2 SIDES= 20')
left side	12.2	16.6	min.	5 (SUM OF 2 SIDES= 20')
Rear Yard Depth (feet)	15.7	15	min.	20
Height stories	3	3	stories ²	3
feet	30.4	31.48	Feet	35
Open Space (% of G.F.A. or lot size) ³	N/A	N/A	min.	N/A
Landscaped (sf)	N/A	N/A	(sf)	N/A
Usable (sf)	N/A	N/A	(sf)	N/A
Parking Spaces (#) ⁴	2	3	min.	6
Parking Area Setbacks (feet) (where applicable)	N/A	N/A	min.	N/A
Loading Spaces (#)	N/A	N/A	min.	N/A
Bicycle Parking ⁵ short term	N/A	2	min.	1
long term	N/A	10	min.	9

¹ FAR is based on Gross Floor Area. See Section 5.3.22 for how to calculate Gross Floor Area. On a separate page, provide the calculations you used to determine FAR, including the calculations for Gross Floor Area.

² Where two heights are noted in the dimensional tables, refer to Section 5.3.19, Reduced Height Buffer Area to determine the applicable height.

³ Per Section 5.3.22(C), district dimensional requirements are calculated based on GFA or lot size, depending on the zoning district. On a separate page, show how you determined the open space area amounts.

⁴ See Section 6.1, Off-Street Parking and Section 5.9.4.F. If requesting a parking reduction, refer to Section 6.1.5.

⁵ See Section 6.1.12, Bicycle Parking, or refer to the [Bicycle Parking Guidelines](#).



IMPACT STATEMENT

Building Address: 18 Grafton Street, Arlington

Prepared By: MGD+ LLC / Derek Rubinoff

Preservation of Landscape

The proposed building will be located approximately in the same footprint as the existing structure. The lot is relatively flat, with no trees impacted by the proposed work. The single street tree located at the front left corner of the lot will be protected throughout the duration of construction.

Relation of Buildings to Environment

The proposed structure maintains the same orientation as the existing building. The primary entrance to the building is on the side. The scale of the building was designed to maintain the aesthetic of a single-family residence. The driveway remains on the left side of the property, consistent with current conditions and serves as a walkway to the main entry. The building consists of 3 full stories and incorporates a mansard roof with dormers at the third level, reflecting both the existing building and the architectural context of adjacent homes. A shed for bicycle storage will replace the existing garage in the back-left corner of the lot.

Open Space

Usable open space is primarily situated at the rear of the property, consistent with the current layout. The front yard will be landscaped with lawn areas similar to existing conditions. This open space will be shared by all units. Landscaping along the left and right sides of the structure is limited due to driveway placement and sun exposure. The left side driveway remains in its existing location, while the right side will be dedicated to mechanical equipment placement and access to the crawl space.

Circulation

Pedestrian circulation from all units connects directly to Grafton Street. Residents may access the parking area via the public sidewalk.

Surface Water Drainage

Stormwater runoff from the roof will be directed through a gutter system to a subsurface stormwater management system located beneath the driveway. This system includes four Cultec chambers, as detailed in the civil engineering plans. A trench drain will be installed at the terminus of the parking area to capture surface runoff. Window wells will be equipped with precautionary drains, which will also discharge into the stormwater system.

ARCHITECTURAL
HABITAT
DESIGN
CONSULTATION



411 LEXINGTON STREET NEWTON, MA 02459
(617) 557-3225 MGD+ (5643)
MGDPLUS.COM



Utility Service

All utility lines will be installed underground. New 1" domestic water service lines will be extended from the 6" municipal main to each unit. A dedicated 2" line will provide water for the fire suppression system. A new sewer line will also be installed and encased in concrete, per the civil plans, due to its proximity to the water lines.

Special Features

A six-foot-tall privacy fence will be installed along the perimeter of the property. Secure permanent bicycle storage will be provided in a dedicated shed located at the rear of the lot. Temporary bike location will be provided in the front of the building.

Safety

All units will meet applicable code requirements for means of egress. Any deck, landing, or similar feature exceeding 30 inches in height will include a code-compliant guardrail. Entry doors are located within the required NFPA distance from Grafton Street. All units will be equipped with the infrastructure to support optional user-installed surveillance systems.

Heritage

The building design complements the residential character of Grafton Street. The mansard-style roof maintains a traditional two-and-a-half-story appearance, consistent with neighboring structures.

Microclimate

All walkways will be constructed using light gray porous paving materials to reduce solar heat gain and promote natural groundwater recharge. The roof will be surfaced with a light-colored EPDM membrane, consistent with EPA recommendations for cool roof installations.

Sustainable Building and Site Design

The project will comply with the Massachusetts Stretch Energy Code. The building will operate fully on electricity for heating, cooling, and cooking. Electric vehicle-ready circuits will be installed at the parking area to accommodate future EV charger installations. The roof structure will be designed to be solar-ready. See the Sustainable Buildings and Site Design Analysis for further details.

ARCHITECTURAL
HABITAT
DESIGN
CONSULTATION



411 LEXINGTON STREET NEWTON, MA 02459
(617) 557-3222 • MGD (5643)
MGDPLUS.COM

18 GRAFTON STREET

COVER PAGE

9/30/25



25 of 285

MGD
HABITAT DESIGN

411 Lexington St, Newton - MA 02466
mgdplus.com
info@mgdplus.com

PAGE A-00

SHEET LIST	
SHEET NUMBER	SHEET NAME
PAGE A-00	COVER PAGE
PAGE A-01	SHEET LIST & CODE SUMMARY
PAGE A-02	EXISTING CONDITIONS
PAGE A-03	ARCHITECTURAL SITE PLAN
PAGE A-04	AREA PLANS
PAGE A-05	CRAWL SPACE FLOOR PLAN
PAGE A-06	FIRST FLOOR PLAN
PAGE A-07	SECOND FLOOR PLAN
PAGE A-08	THIRD FLOOR PLAN
PAGE A-09	ROOF PLAN
PAGE A-10	FRONT ELEVATION
PAGE A-11	LEFT ELEVATION
PAGE A-12	RIGHT ELEVATION
PAGE A-13	REAR ELEVATION
PAGE A-14	FRONT ELEVATION RENDER

ZONING ANALISYS SUMMARY				
ADDRESS		18 GRAFTON STREET ARLINGTON MA 02474		
ZONING DISTRICT		NMF		
LOT SIZE		4804 SF		
DESCRIPTION	CODE REFERENCE	REQUIRED / ALLOWED	EXISTING	PROPOSED
USE				
LOT AREA		4804 SF	4804 SF	4804 SF
FAR - GFA		F.A.R NOT REQUIRED	F.A.R NOT REQUIRED	F.A.R NOT REQUIRED
BUILDING HEIGHT		35.0 ft /	SEE CIVIL DWGS	SEE CIVIL DWGS
MIN. USABLE OPEN SPACE		NOT REQUIRED	NOT REQUIRED	NOT REQUIRED
MAX. LOT COVERAGE		NOT REQUIRED	NOT REQUIRED	NOT REQUIRED
SETBACKS				
FRONT		15.0 ft	SEE CIVIL DWGS	SEE CIVIL DWGS
SIDE (LEFT)		5.0 ft	SEE CIVIL DWGS	SEE CIVIL DWGS
SIDE (RIGHT)		5.0 ft	SEE CIVIL DWGS	SEE CIVIL DWGS
REAR	20.0 ft	SEE CIVIL DWGS	SEE CIVIL DWGS	

ARLINGTON ZONING BYLAWS			
ZONING DISTRICT: NMF			
LOT SIZE: 4,804 SF	ARLINGTON ZONING BYLAWS		
PROPOSED USE	ALLOWED	PROPOSED	REFERENCE SECTION
	RESIDENTIAL	RESIDENTIAL	SECTION 5
SITE DIMENSIONAL STANDARDS			
LOT SIZE	NO REQUIREMENT	COMPLIANT	26 of 285 SECTION 5
LOT FRONTAGE (MIN.)	NO REQUIREMENT	COMPLIANT	SECTION 5
SETBACKS	FRONT: 15' OR AVERAGE	SEE CIVIL DRAWINGS - COMPLIANT	SECTION 5
	SIDE: 5'	SEE CIVIL DRAWINGS - COMPLIANT	SECTION 5
	REAR: 20'	SEE CIVIL DRAWINGS - COMPLIANT	SECTION 5
LOT COVERAGE	NO REQUIREMENT	SEE CIVIL DRAWINGS - COMPLIANT	SECTION 5
LANDSCAPED / USABLE OPEN SPACE	NO REQUIREMENT	SEE CIVIL DRAWINGS - COMPLIANT	SECTION 5
LOT AREA PER DWELLING UNIT	NO REQUIREMENT	COMPLIANT	SECTION 5
PARKING PLACEMENT	NO PARKING ALLOWED IN FRONT SETBACK	SEE CIVIL DRAWINGS - COMPLIANT	SECTION 6
BICYCLE PLACEMENT	1.5 SPACES PER DWELLING UNIT	COMPLIANT	SECTION 6
BUILDING MASSING			
F.A.R	NO REQUIREMENT	COMPLIANT	SECTION 5
MAX HEIGHT	3 STORIES / 35 FEET	3 STORIES / 34 FEET - COMPLIANT	SECTION 5
LOT COVERAGE	NO REQUIREMENT	SEE CIVIL DRAWINGS - COMPLIANT	

18 GRAFTON STREET

SHEET LIST & CODE SUMMARY

9/30/25

Scale 1 1/2" = 1'-0"



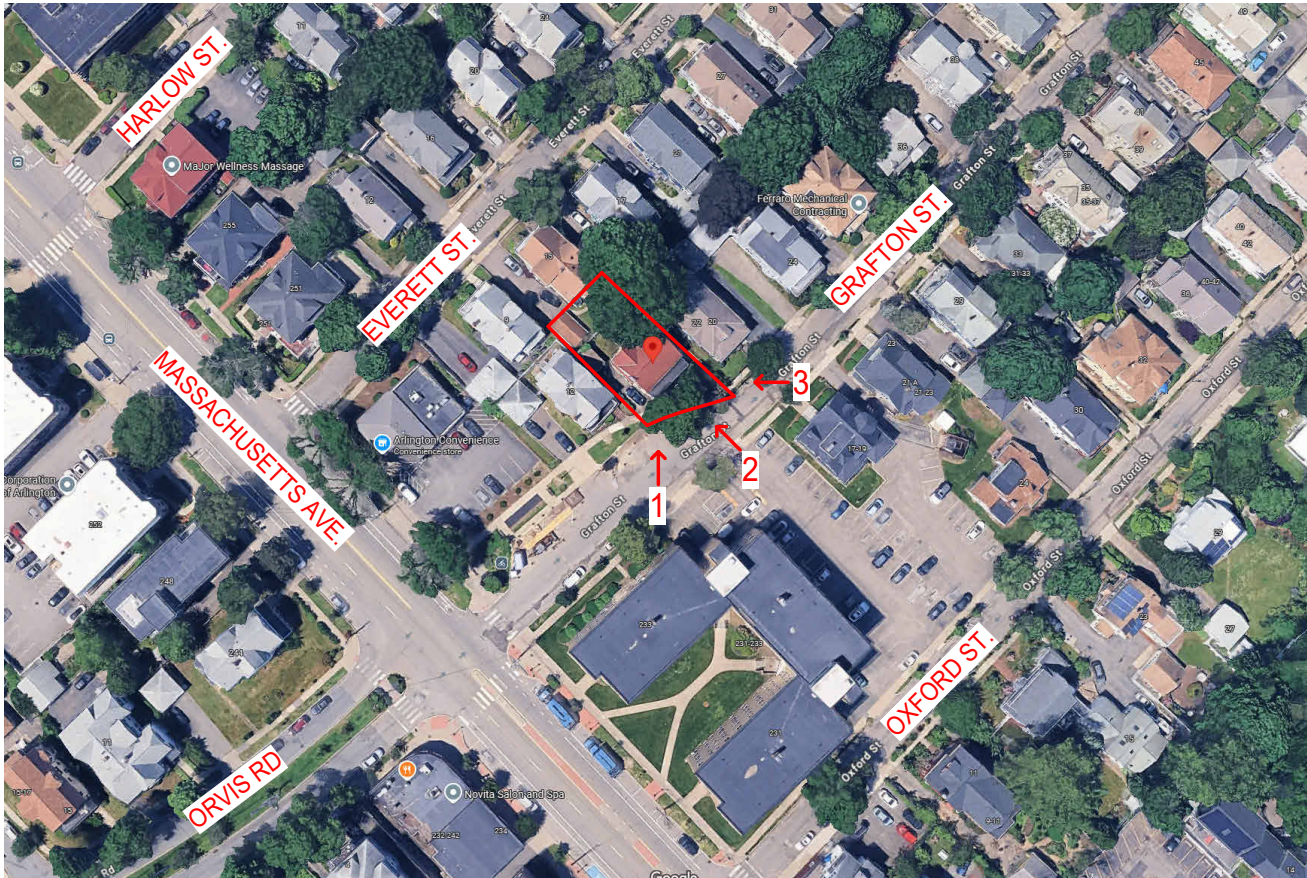
VIEW 1



VIEW 2



VIEW 3



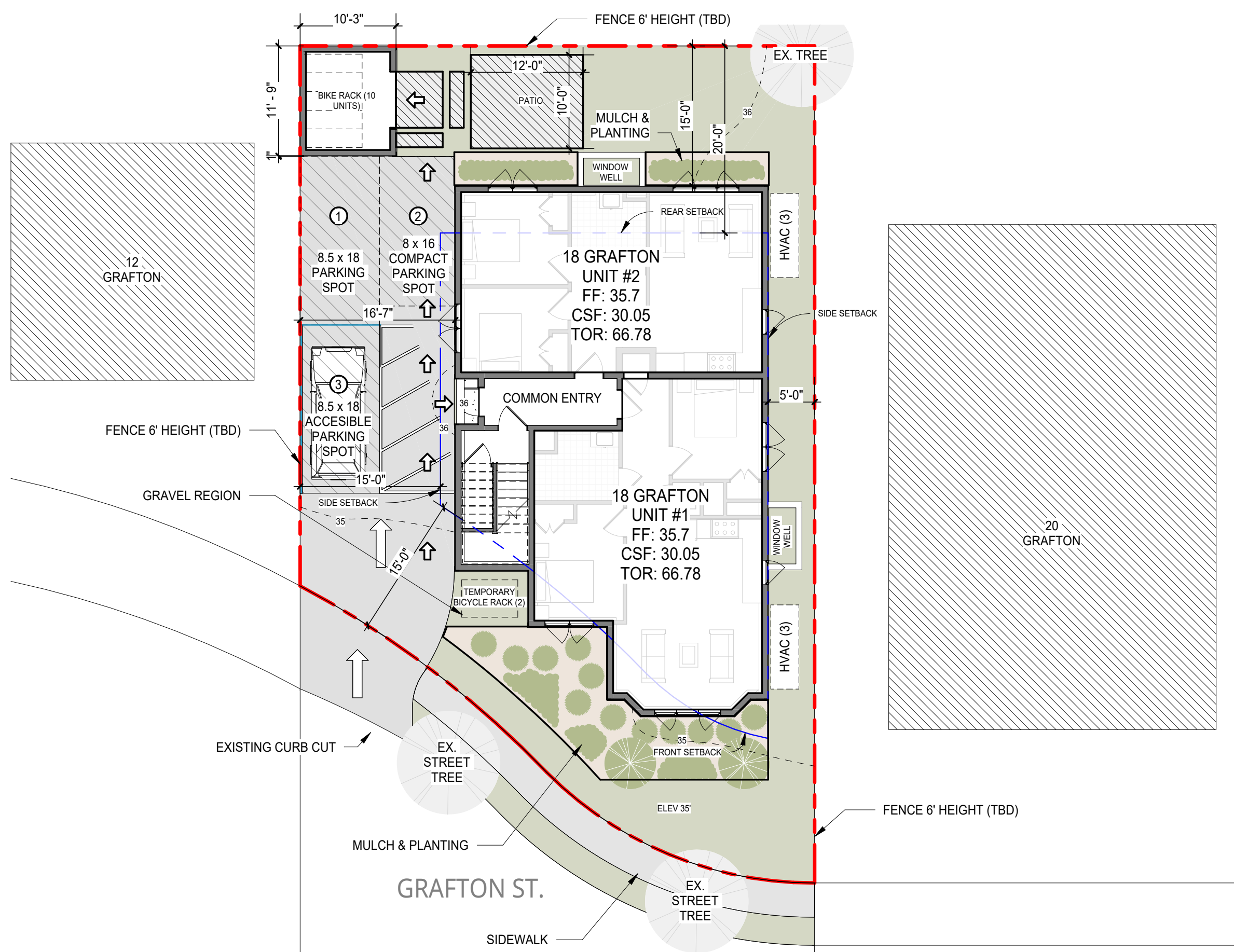
LOCATION MAP

18 GRAFTON STREET

EXISTING CONDITIONS

9/30/25

Scale

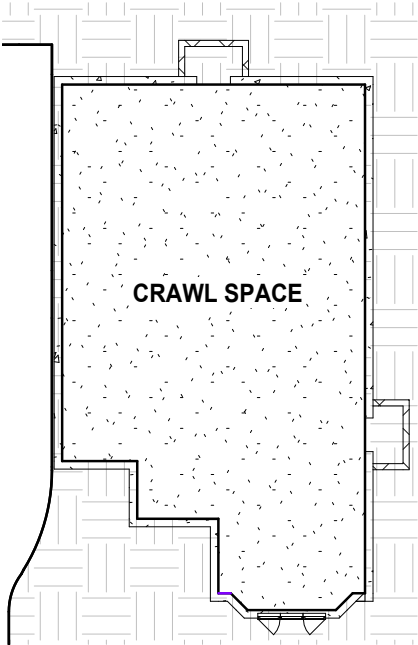


18 GRAFTON STREET

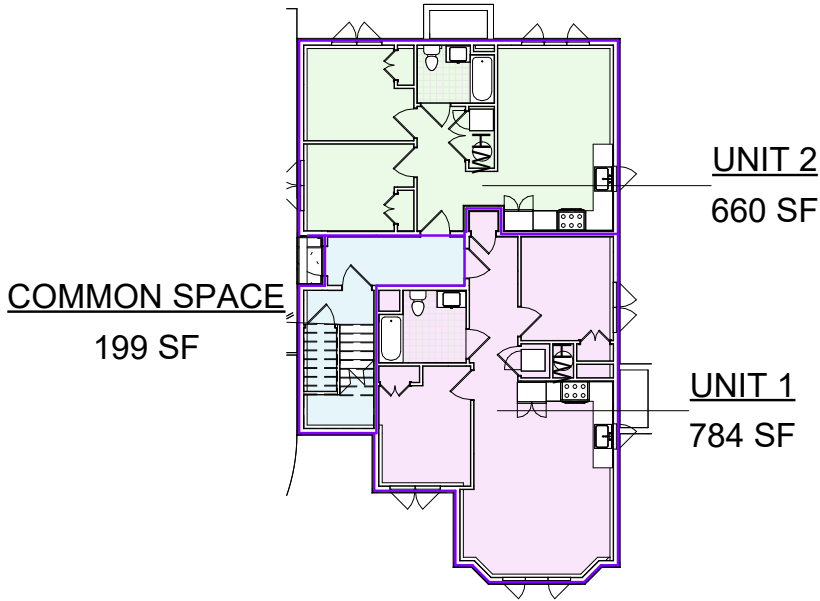
ARCHITECTURAL SITE PLAN

9/30/25

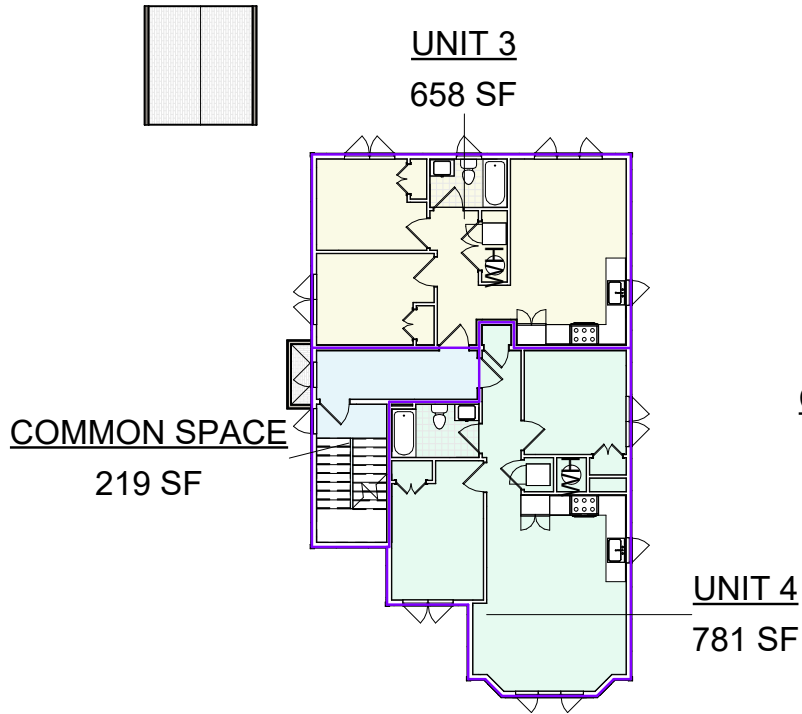
Scale 3/32" = 1'-0"



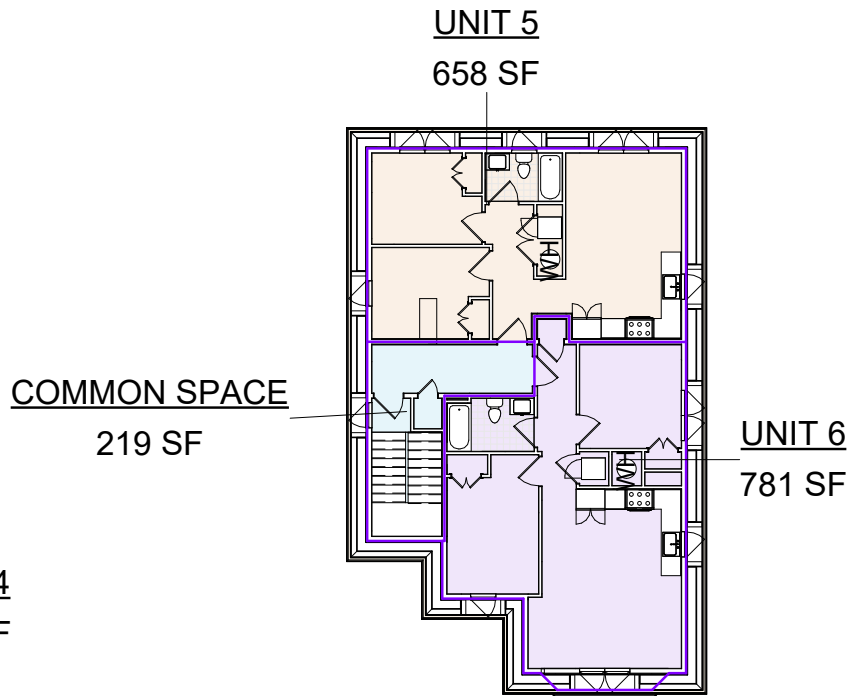
5 00 - Crawl Space
1" = 20'-0"



6 01 - First Floor
1" = 20'-0"



7 02 - Second Floor
1" = 20'-0"



8 03 - Attic
1" = 20'-0"

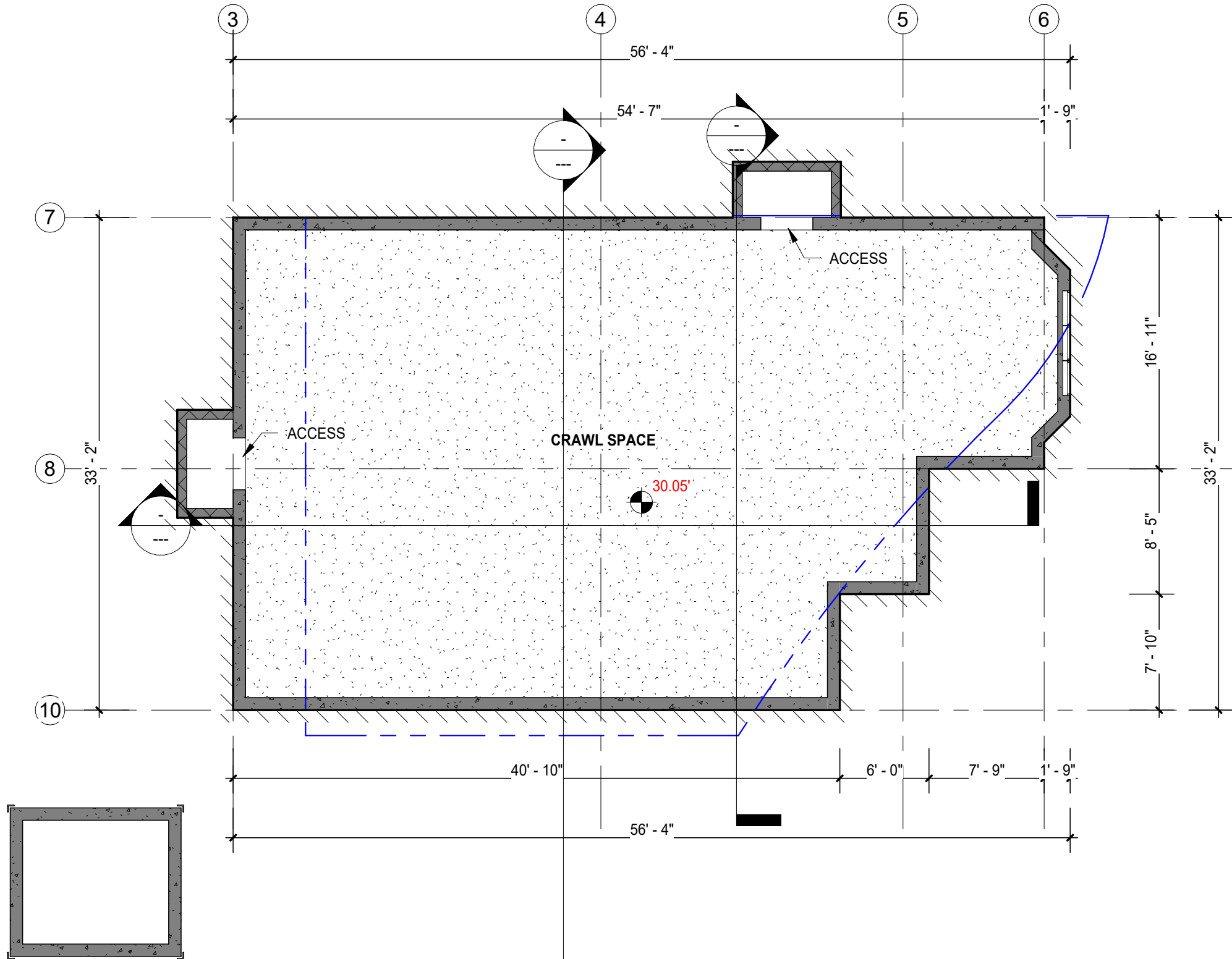
MARKETABLE FLOOR AREA		
LEVEL	AREA (SF)	COMMENTS
COMMON SPACE		
01 - First Floor	199 SF	
02 - Second Floor	219 SF	
03 - Third Floor	219 SF	
	637 SF	
UNIT 1		
01 - First Floor	784 SF	
	784 SF	
UNIT 2		
01 - First Floor	660 SF	
	660 SF	
UNIT 3		
02 - Second Floor	658 SF	
	658 SF	
UNIT 4		
02 - Second Floor	781 SF	
	781 SF	29 of 285
UNIT 5		
03 - Third Floor	658 SF	
	658 SF	
UNIT 6		
03 - Third Floor	781 SF	
	781 SF	
TOTAL FLOOR AREA	4960 SF	

18 GRAFTON STREET

AREA PLANS

9/30/25

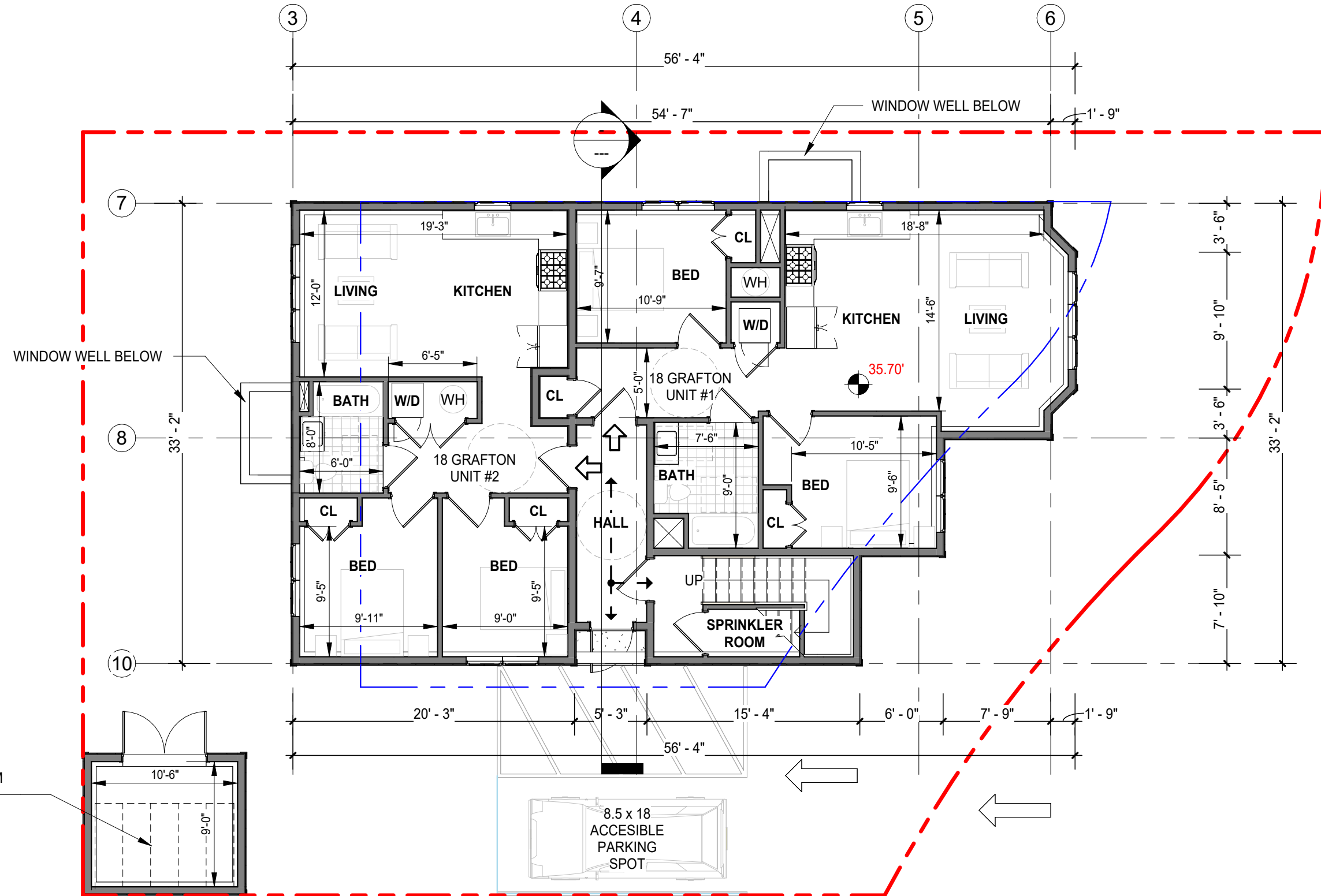
Scale 1" = 20'-0"



18 GRAFTON STREET

CRAWL SPACE FLOOR PLAN

9/30/25
Scale 1/8" = 1'-0"

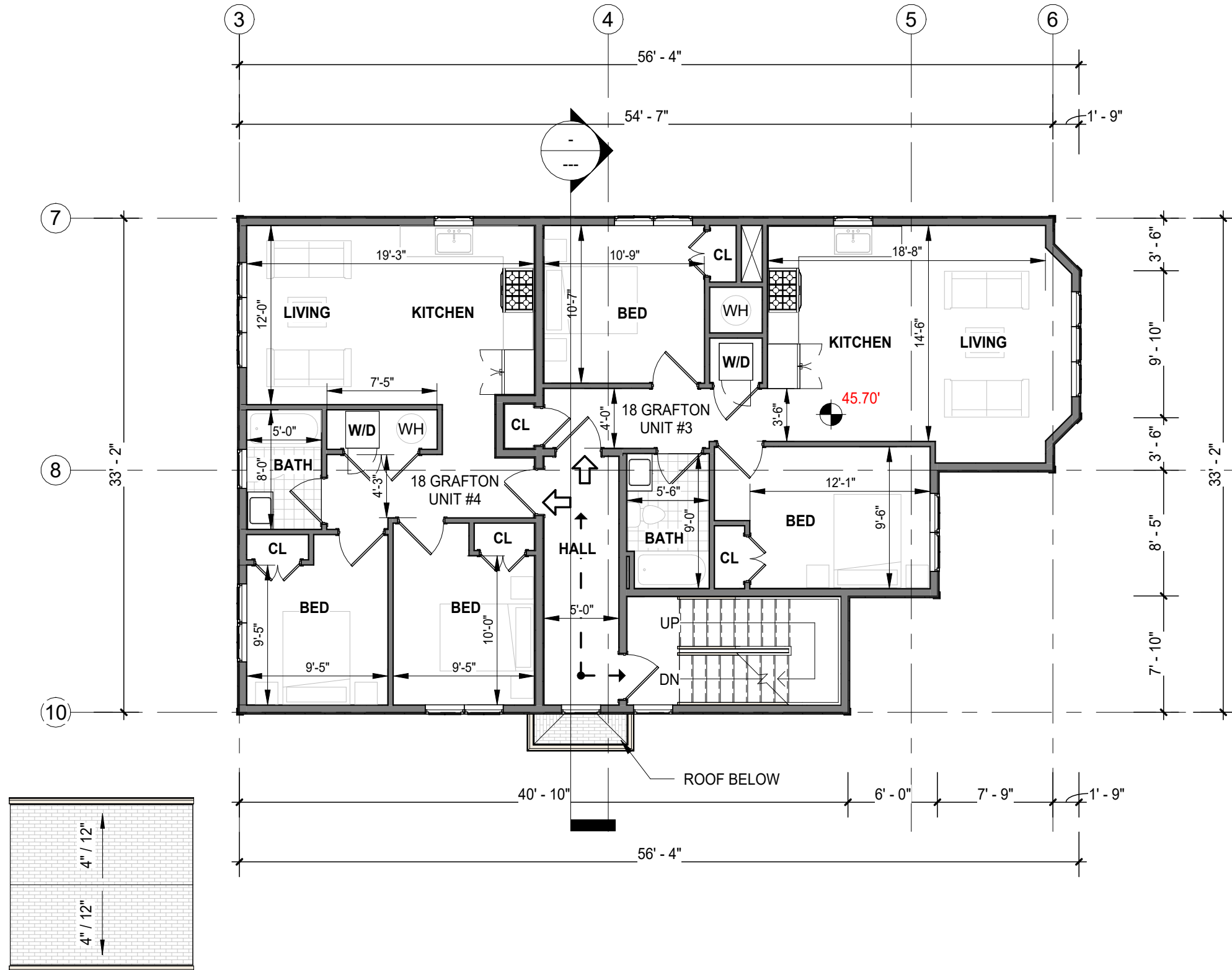


31 of 285

18 GRAFTON STREET

FIRST FLOOR PLAN

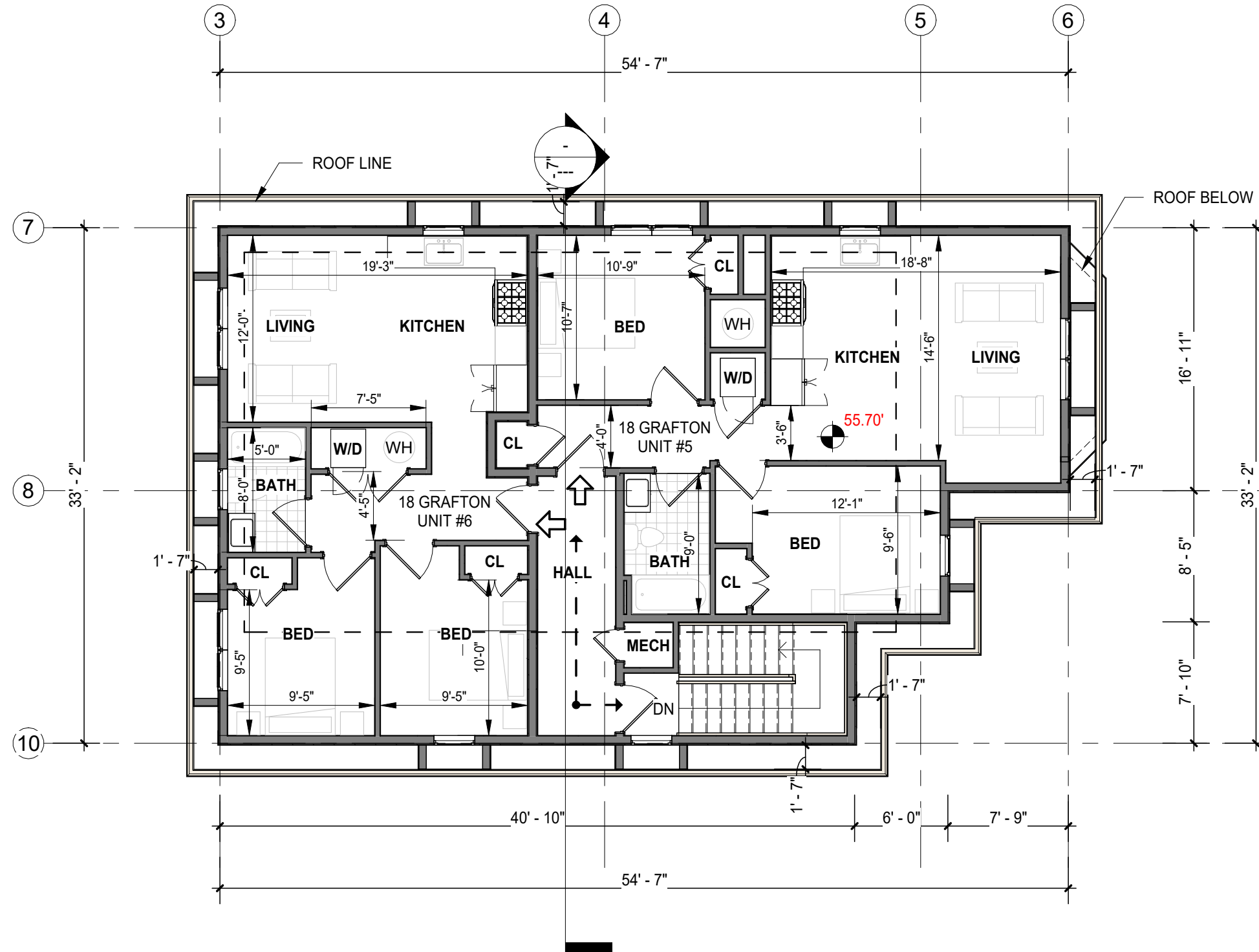
9/30/25
Scale 1/8" = 1'-0"



18 GRAFTON STREET

SECOND FLOOR PLAN

9/30/25
Scale 1/8" = 1'-0"



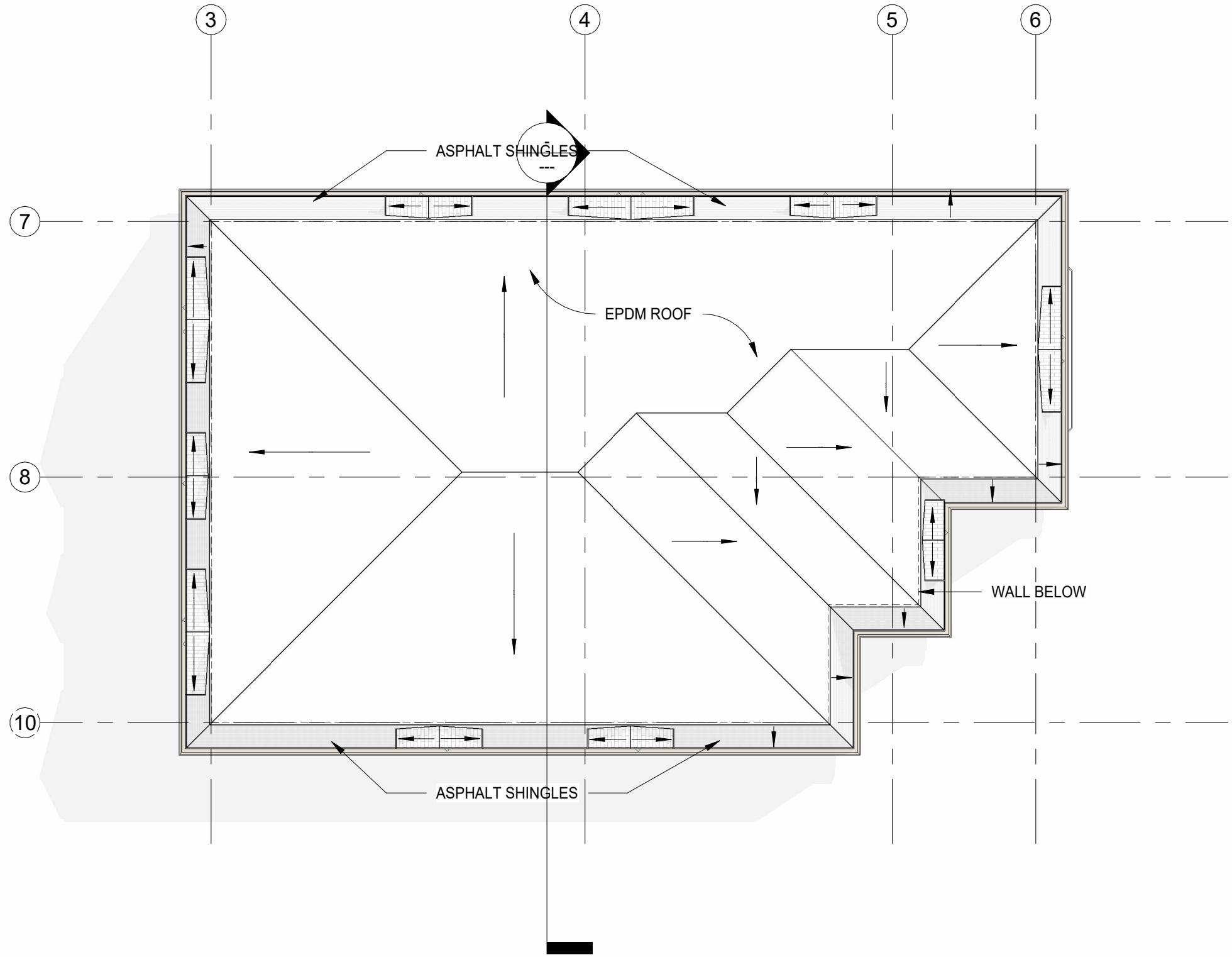
33 of 285

18 GRAFTON STREET

THIRD FLOOR PLAN

9/30/25

Scale 1/8" = 1'-0"

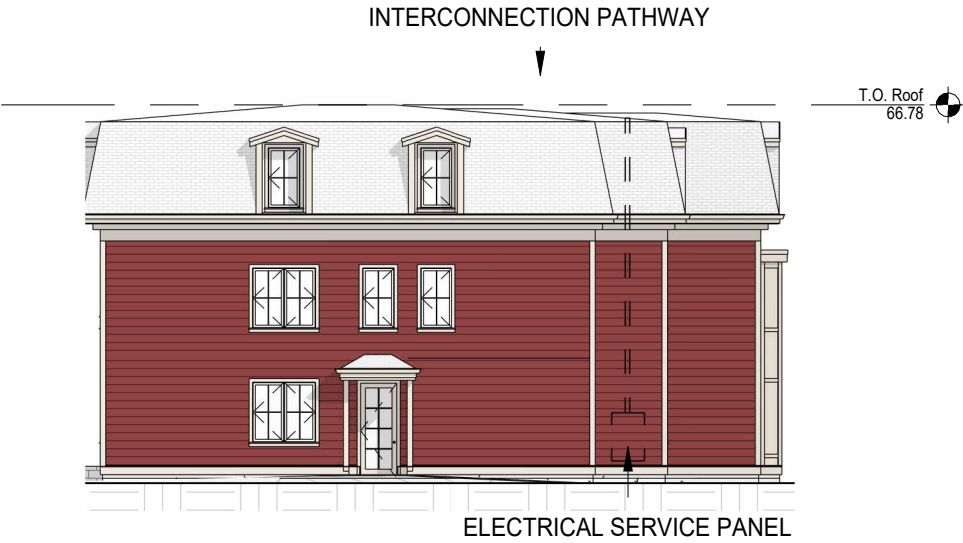
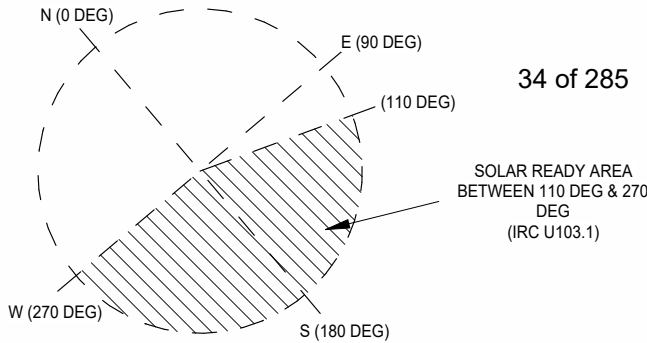
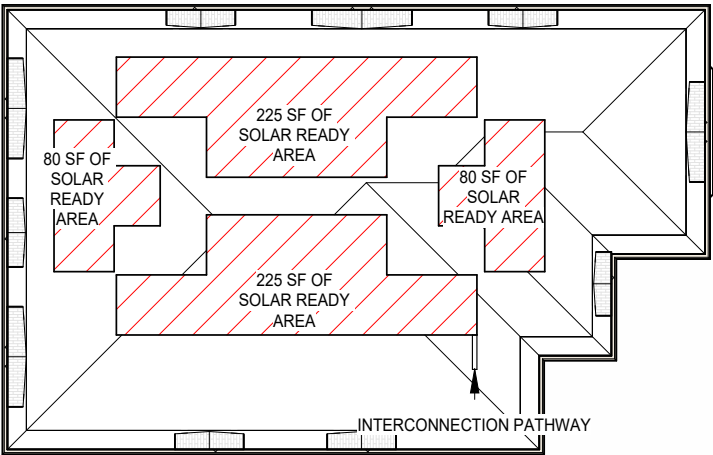


SOLAR READY ZONE AREA

U103.3 SOLAR READY ZONE AREA.THE TOTAL SOLAR READY ZONE AREA SHALL BE NOT LESS THEN 300 SF EXCLUSIVE OF MANDATORY ACCESS OR SETBACK AREAS AS REQUIRED BY IFC. ****COMPLIANT****

THE SOLAR READY ZONE SHALL BE COMPOSED OF AREAS NOT LESS THAN 5 FEET IN WIDTH AND NOT LESS THAN 80 SF. ****COMPLIANT****

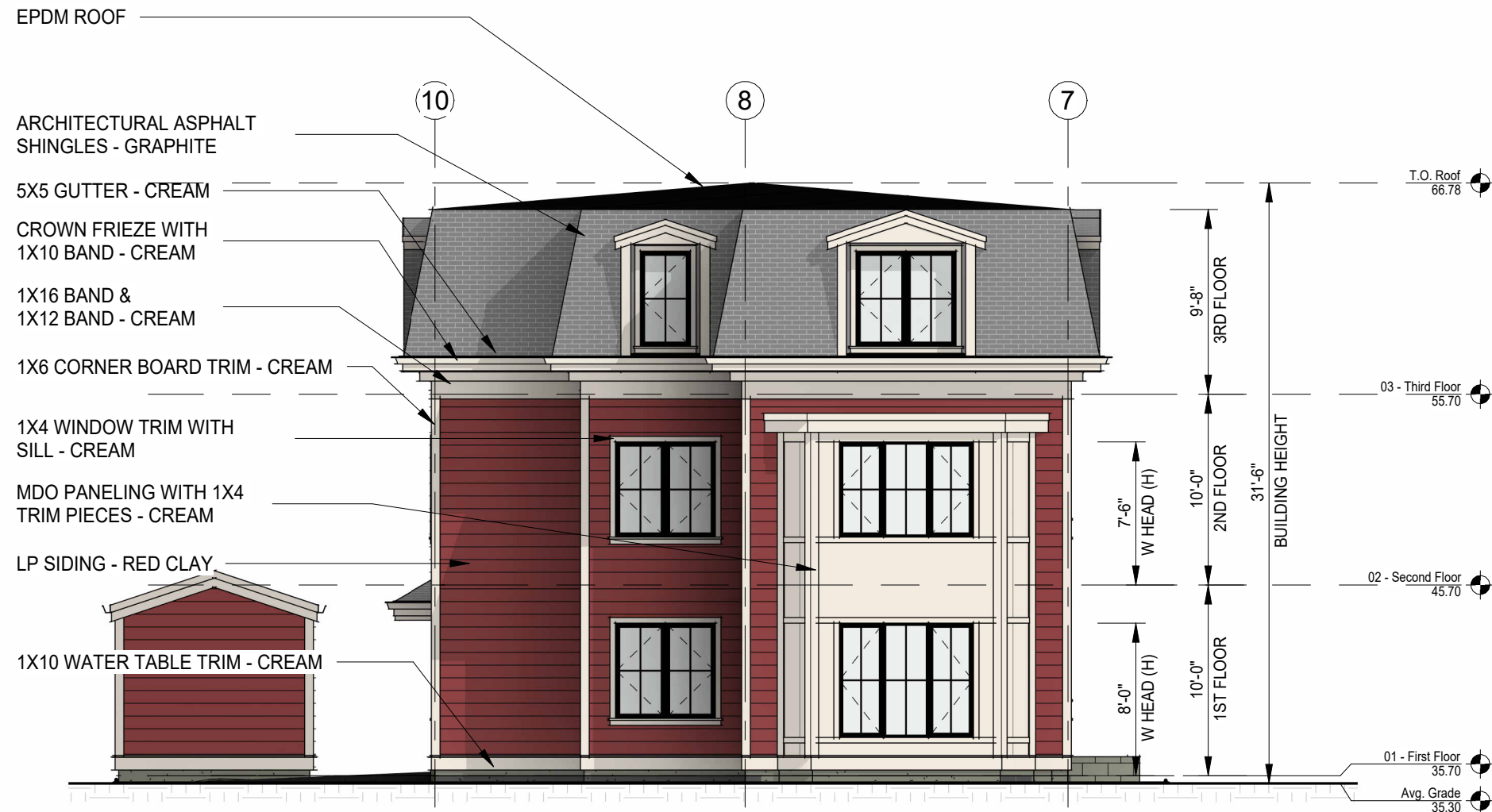
POSSIBLE TOTAL SOLAR READY ZONE SF: 610 SF >= 300 SF REQUIRED (EACH UNIT) - U103.3



18 GRAFTON STREET

ROOF PLAN

9/30/25
Scale As indicated



18 GRAFTON STREET

FRONT ELEVATION

9/30/25

Scale 1/8" = 1'-0"



36 of 285

18 GRAFTON STREET

LEFT ELEVATION

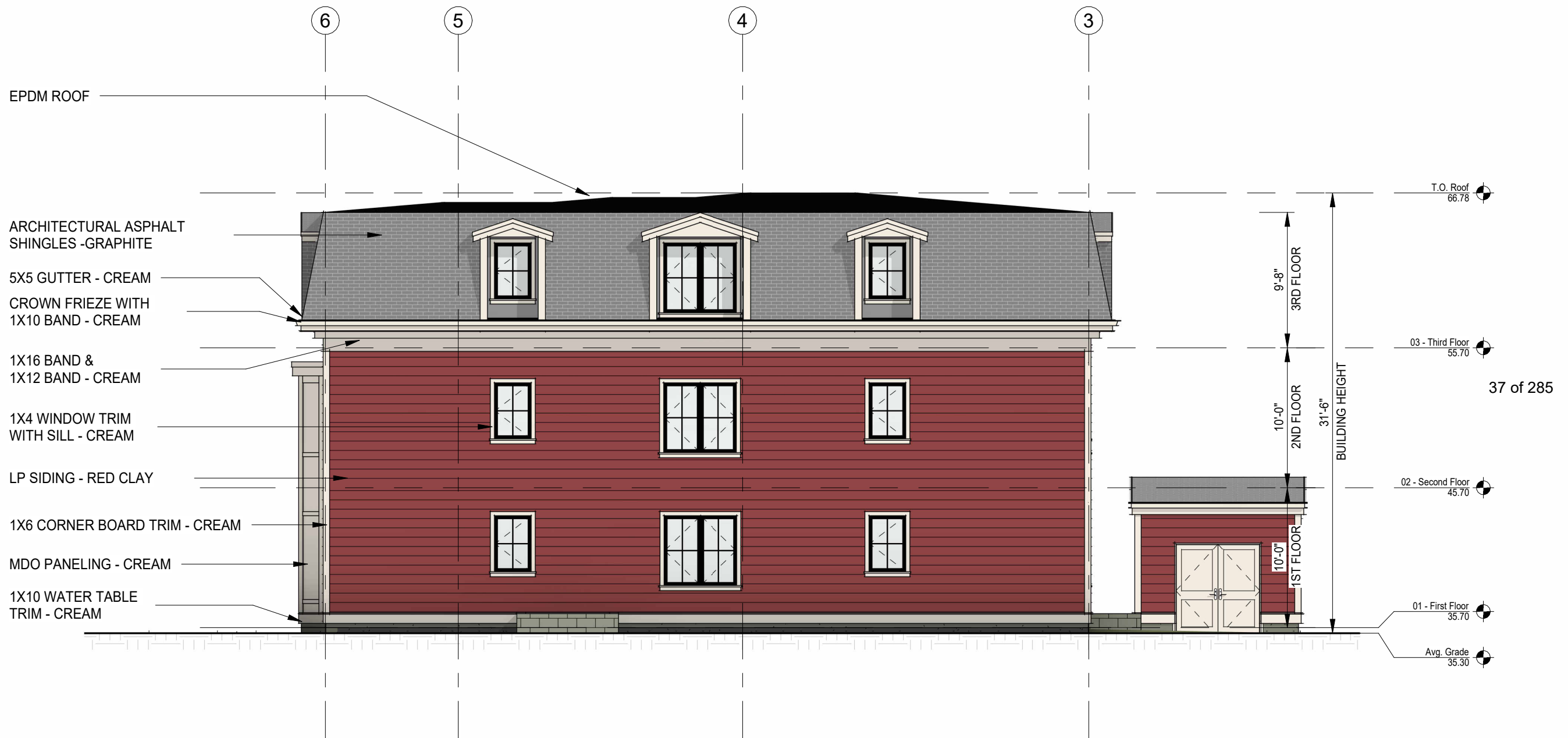
9/30/25

Scale 1/8" = 1'-0"

PAGE A-11

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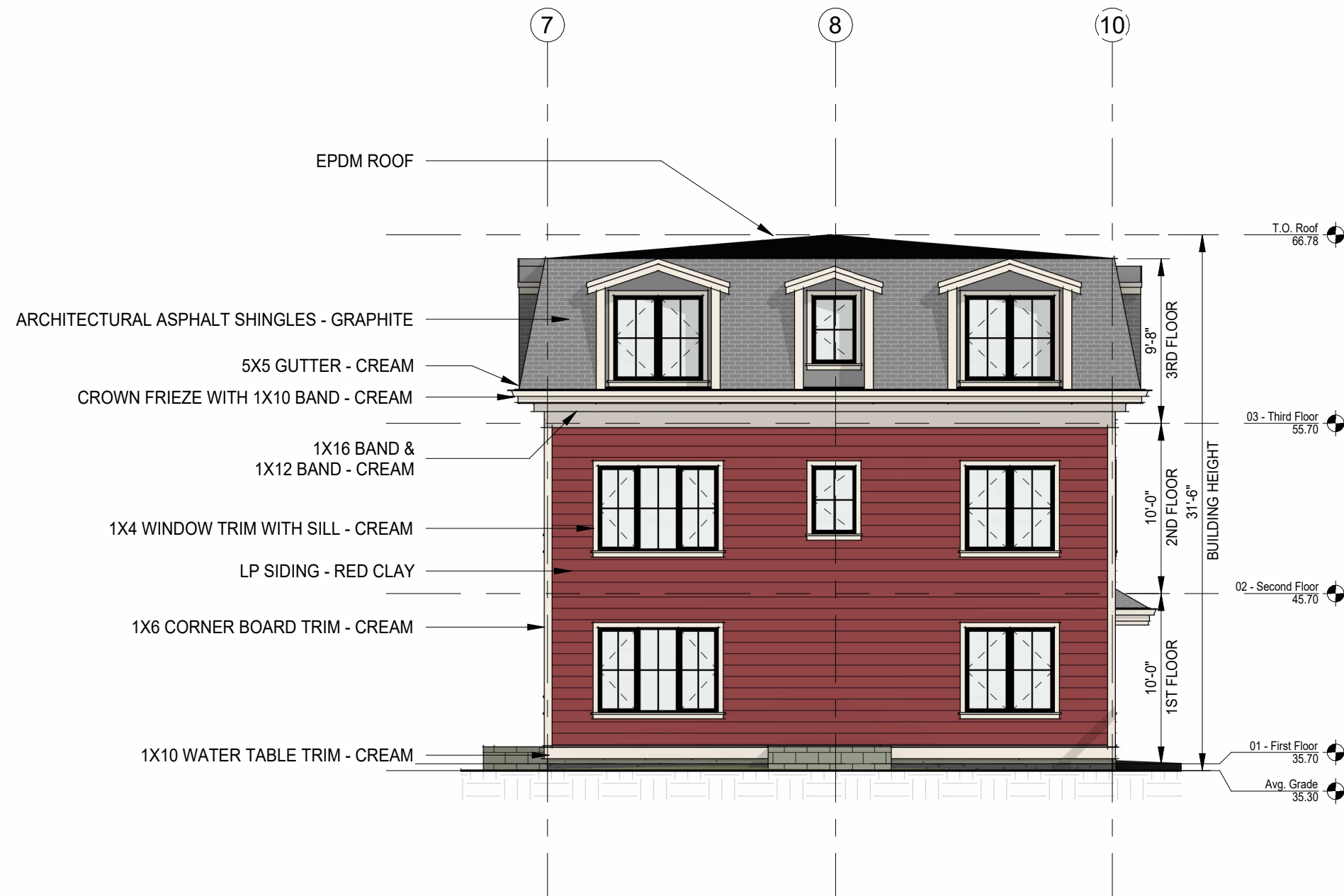


37 of 285

18 GRAFTON STREET

RIGHT ELEVATION

9/30/25
Scale 1/8" = 1'-0"



18 GRAFTON STREET

REAR ELEVATION

9/30/25

Scale 1/8" = 1'-0"

18 GRAFTON STREET

FRONT ELEVATION RENDER



39 of 285

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PAGE A-14

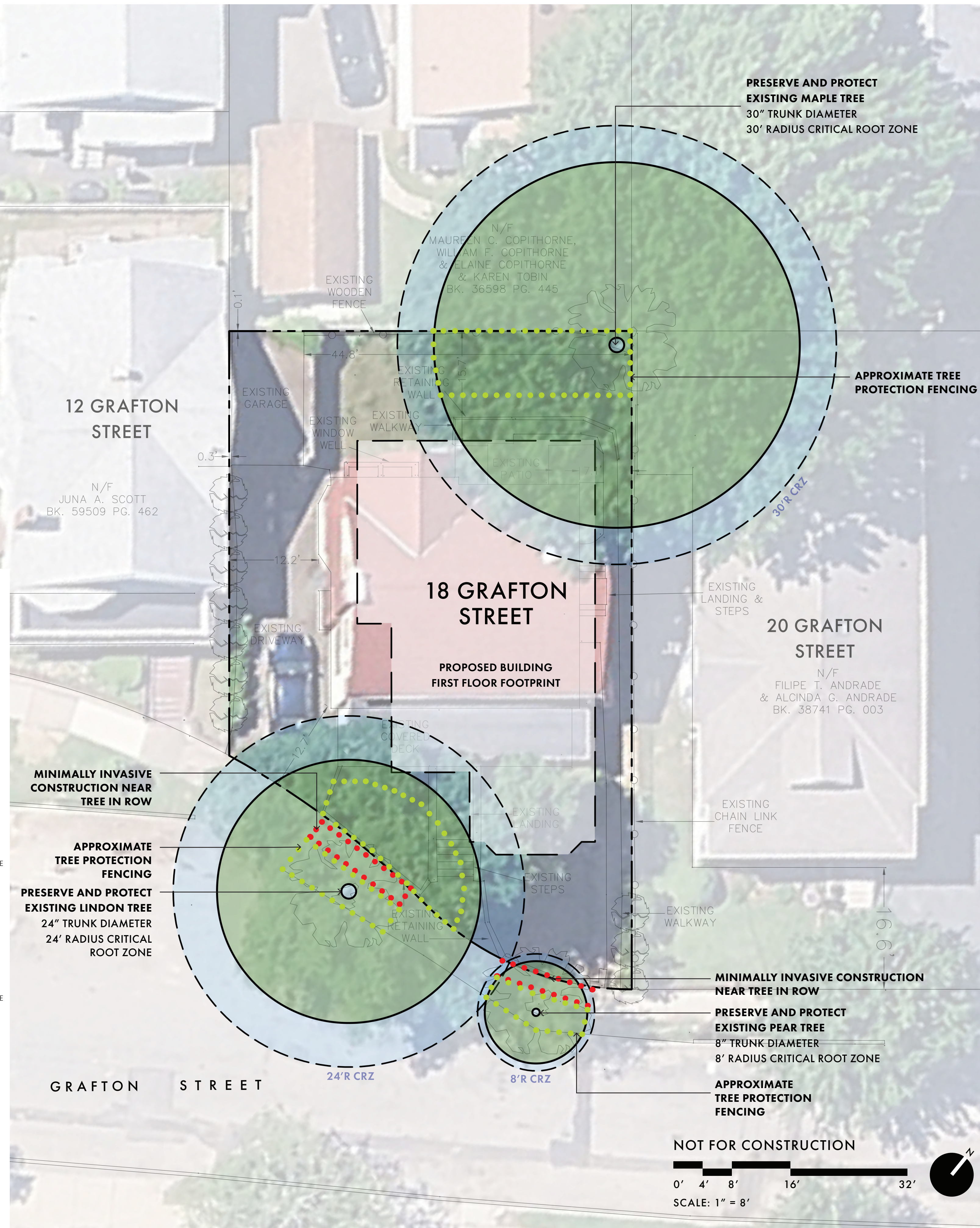
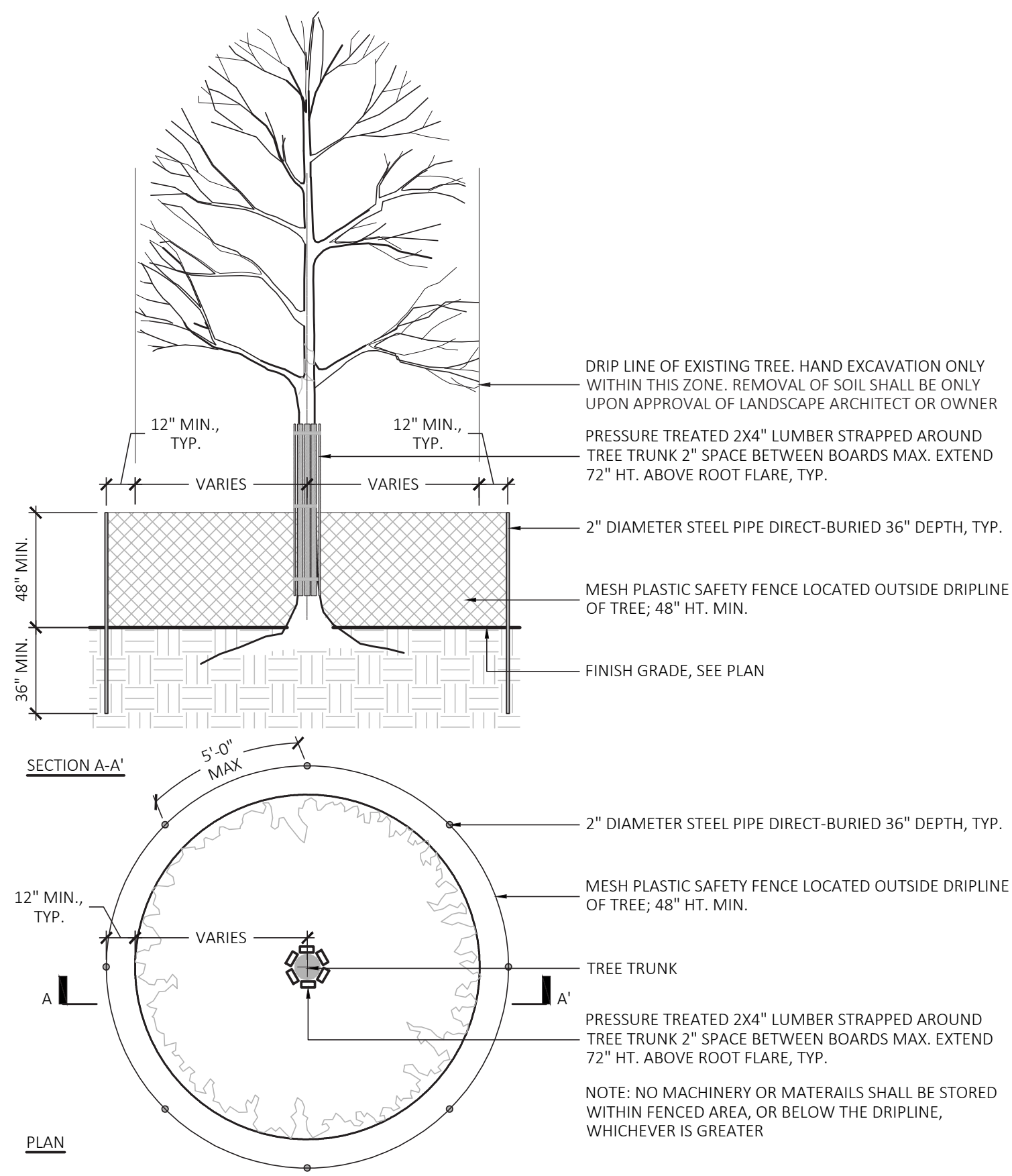
18 GRAFTON STREET

LANDSCAPE CONCEPT

MDLA

SA DEVELOPMENT
CORP

LANDSCAPE ARCHITECT
STAMP

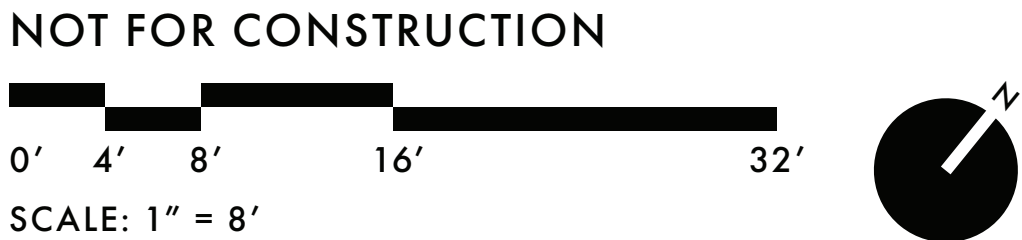




- LEGEND**
- 1 NEW CONCRETE CURB CUT. WIDTH TO MATCH EXISTING
 - 2 NEW CIP CONCRETE WALKWAY. WIDTH TO MATCH EXISTING
 - 3 REPAIR AND IMPROVE EXISTING LAWN APRON. EXISTING TREES TO REMAIN
 - 4 PERMEABLE CONCRETE PAVERS
 - 5 LAWN, TYPICAL
 - 6 BUILDING OVERHANG
 - 7 TEMPORARY BIKE PARKING (2 PARKING SPOTS)
 - 8 ASPHALT DRIVEWAY
 - 9 6' HT. PRIVACY FENCE (4" ABOVE FINISHED GRADE. 6" WIDE), TYPICAL
 - 10 DECORATIVE STONE SURFACING
 - 11 HVAC UNIT LOCATION
 - 12 TRASH AREA
 - 13 BIKE STORAGE SHED (SEE ARCHITECTURAL PLANS)
 - 14 WINDOW WELL (SEE ARCHITECTURAL PLANS)
 - 15 LANDSCAPE OPEN SPACE 10% MIN (4,235SF TOTAL LOT - 1,230 SF = 30%)

PLANT SCHEDULE

PLANT SCHEDULE				
SYM	QTY	LATIN NAME	COMMON NAME	SIZE
SHADE TREES				
AR	1	ACER RUBRUM 'RED SUNSET'	RED SUNSET MAPLE	3.5"-4" CAL.
AS	2	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	SERVICEBERRY	6'-7' HT.
SHRUBS AND GROUNDCOVERS				
CA	7	CLETHERA ALNIFOLIA 'HUMMINGBIRD'	SWEET PEPPERBUSH	5 GAL.
IG	14	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY	36" HT.
PERENNIALS AND ORNAMENTAL GRASSES				
AC	43	ASTILBE CHINENSIS 'VISIONS IN WHITE'	VISIONS IN WHITE ASTILBE	1 GAL.
CP	32	CAREX PENNSYLVANICA	PENNSYLVANIA SEDGE	1 GAL.
NW	7	NEPETA X FAASSENII 'WALKERS LOW'	WALKER'S LOW CATMINT	1 GAL.
RF	28	RUDBECKIA FULGIDA 'GOLDSTURM'	BLACK EYED SUSAN	1 GAL.





PENNSYLVANIA SEDGE



6'HT. PRIVACY FENCE (4" ABOVE FINISHED GRADE)



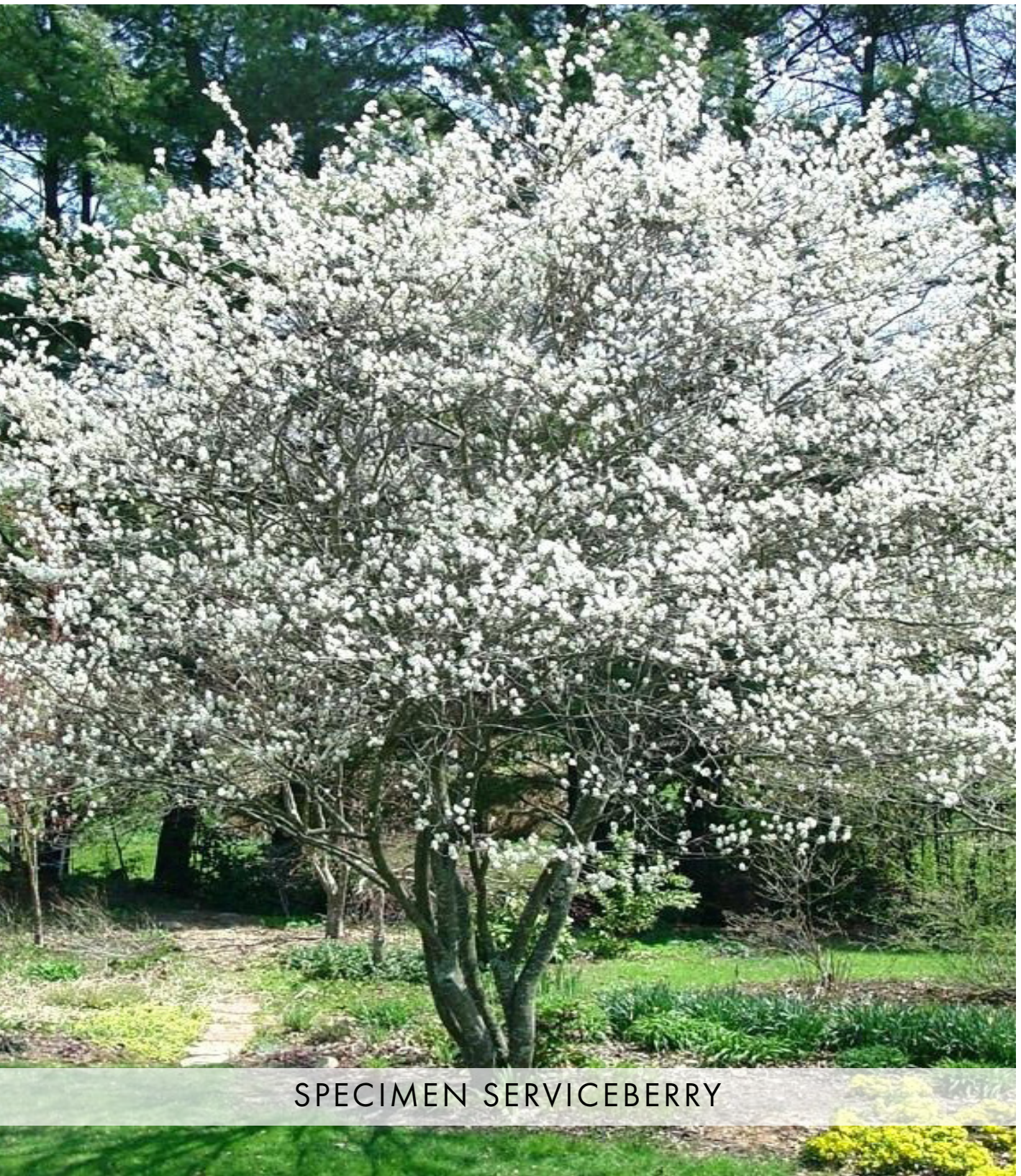
PERMEABLE CONCRETE PAVERS



INKBERRY HOLLY



SWEET PEPPERBUSH



SPECIMEN SERVICEBERRY



RED SUNSET MAPLE



August 11, 2025

Arlington Redevelopment Board

Arlington Town Hall
730 Massachusetts Avenue
Arlington, MA 02476

Re: 18 Grafton Street, Arlington, MA – LEED Certification

To Whom It May Concern:

This letter is to confirm that the proposed residential development at 18 Grafton Street, Arlington, MA is not being registered or pursued under the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) rating system for Building Design and Construction (BD+C) or any other LEED certification pathway.

While the project is not seeking LEED certification, it will comply fully with all applicable requirements of 780 CMR (Massachusetts State Building Code) and related state and local codes, including the Massachusetts Specialized Stretch Energy Code and applicable provisions of the MA Plumbing, Mechanical, and Fire Safety Codes. In addition, certain sustainable design elements, such as energy-efficient building envelope assemblies, code-compliant water-efficient plumbing fixtures, and low-emitting interior finishes, may be incorporated as part of standard design and construction practices.

The LEED Checklist is provided solely for informational purposes and to compare to a LEED certifiable project.

Sincerely,

Trevor O'Leary | Project Manager
MGD+ LLC
411 Lexington Street, Auburndale MA 02466
e. toleary@mgdplus.com
c. (781) 635-3456





LEED v4 for BD+C: New Construction and Major Renovation Project Checklist

Project Name: 18 Grafton St, Arlington
Date: 08/11/25

Y ? N

1			Credit	Integrative Process	1
---	--	--	--------	---------------------	---

15	0	0	Location and Transportation		16
			Credit	LEED for Neighborhood Development Location	16
1			Credit	Sensitive Land Protection	1
2			Credit	High Priority Site	2
5			Credit	Surrounding Density and Diverse Uses	5
3			Credit	Access to Quality Transit	5
1			Credit	Bicycle Facilities	1
2			Credit	Reduced Parking Footprint	1
1			Credit	Green Vehicles	1

4	0	0	Sustainable Sites		10
Y			Prereq	Construction Activity Pollution Prevention	Required
			Credit	Site Assessment	1
			Credit	Site Development - Protect or Restore Habitat	2
			Credit	Open Space	1
2			Credit	Rainwater Management	3
1			Credit	Heat Island Reduction	2
1			Credit	Light Pollution Reduction	1

5	0	0	Water Efficiency		11
Y			Prereq	Outdoor Water Use Reduction	Required
Y			Prereq	Indoor Water Use Reduction	Required
Y			Prereq	Building-Level Water Metering	Required
2			Credit	Outdoor Water Use Reduction	2
3			Credit	Indoor Water Use Reduction	6
			Credit	Cooling Tower Water Use	2
			Credit	Water Metering	1

1	0	0	Energy and Atmosphere		33
Y			Prereq	Fundamental Commissioning and Verification	Required
Y			Prereq	Minimum Energy Performance	Required
Y			Prereq	Building-Level Energy Metering	Required
Y			Prereq	Fundamental Refrigerant Management	Required
			Credit	Enhanced Commissioning	6
			Credit	Optimize Energy Performance	18
			Credit	Advanced Energy Metering	1
			Credit	Demand Response	2
			Credit	Renewable Energy Production	3
1			Credit	Enhanced Refrigerant Management	1
			Credit	Green Power and Carbon Offsets	2

0	0	0	Materials and Resources		13
Y			Prereq	Storage and Collection of Recyclables	Required
Y			Prereq	Construction and Demolition Waste Management Planning	Required
			Credit	Building Life-Cycle Impact Reduction	5
			Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2
			Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
			Credit	Building Product Disclosure and Optimization - Material Ingredients	2
			Credit	Construction and Demolition Waste Management	2

14	0	0	Indoor Environmental Quality		16
Y			Prereq	Minimum Indoor Air Quality Performance	Required
Y			Prereq	Environmental Tobacco Smoke Control	Required
1			Credit	Enhanced Indoor Air Quality Strategies	2
3			Credit	Low-Emitting Materials	3
1			Credit	Construction Indoor Air Quality Management Plan	1
2			Credit	Indoor Air Quality Assessment	2
1			Credit	Thermal Comfort	1
1			Credit	Interior Lighting	2
3			Credit	Daylight	3
1			Credit	Quality Views	1
1			Credit	Acoustic Performance	1

0	0	0	Innovation		6
			Credit	Innovation	5
			Credit	LEED Accredited Professional	1

0	0	0	Regional Priority		4
			Credit	Regional Priority: Specific Credit	1
			Credit	Regional Priority: Specific Credit	1
			Credit	Regional Priority: Specific Credit	1
			Credit	Regional Priority: Specific Credit	1

40	0	0	TOTALS		Possible Points:	110
Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80 to 110						

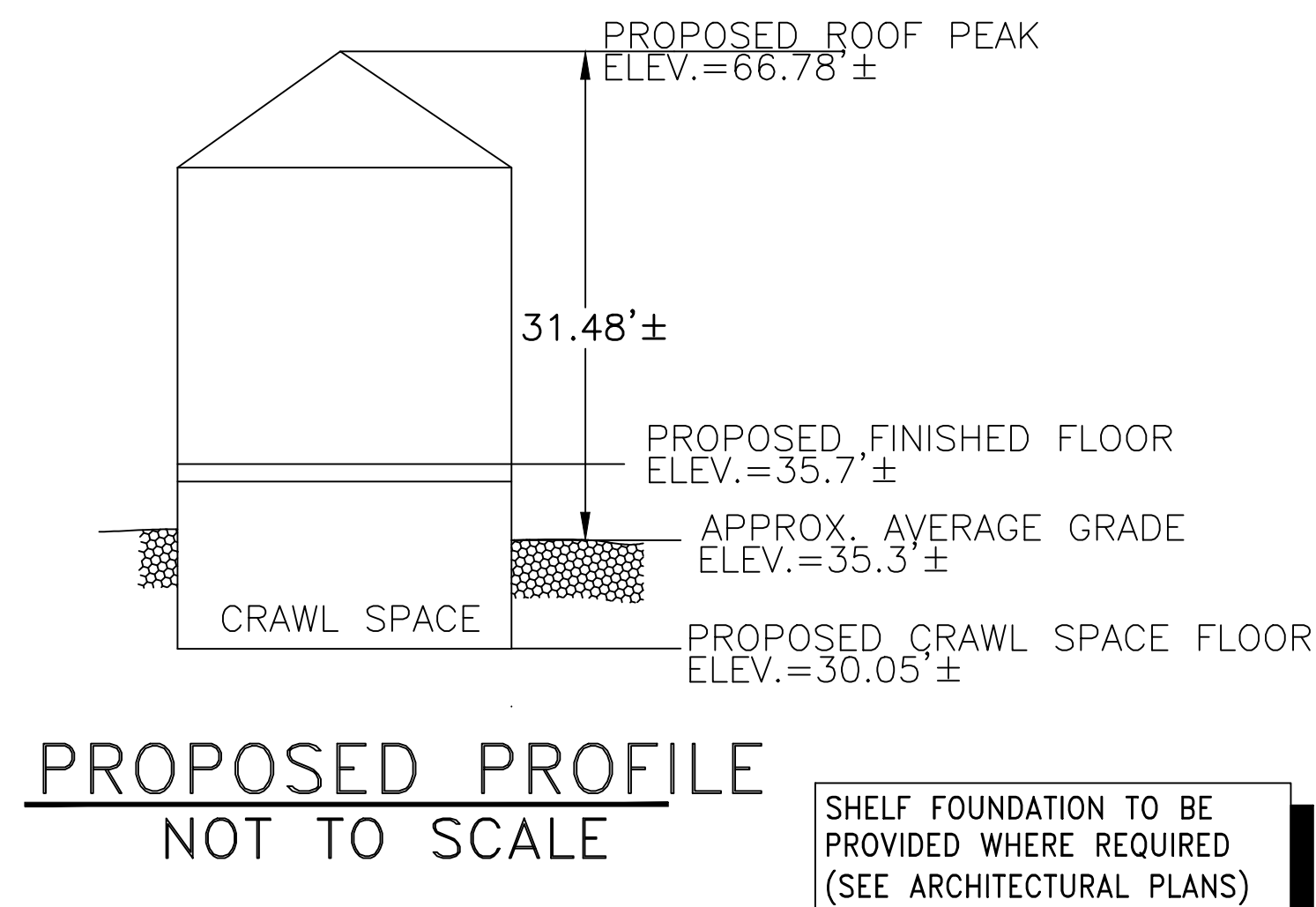
	BOUND
	IRON PIN/PIPE
	STONE POST
	TREE
	TREE STUMP
	SHRUBS/FLOWERS
	SIGN
	BOLLARD
	SEWER MANHOLE
	DRAIN MANHOLE
	CATCH BASIN
	WATER MANHOLE
	WATER VALVE
	HYDRANT
	GAS VALVE
	ELECTRIC MANHOLE
	ELECTRIC HANDHOLE
	UTILITY POLE
	LIGHT POLE
	MANHOLE
	SPOT GRADE
	TOP OF WALL
	BOTTOM OF WALL
	EXISTING BUILDING
	RETAINING WALL
	STONE WALL
	FENCE
	TREE LINE
	SEWER LINE
	DRAIN LINE
	WATER LINE
	GAS LINE
	UNDERGROUND ELECTRIC LINE
	OVERHEAD WIRES
	CONTOUR LINE (MJR)
	CONTOUR LINE (MNR)
	FIRST FLOOR
	BASEMENT FLOOR
	GARAGE FLOOR
	TOP OF FOUNDATION
	PROPOSED CONTOUR LINE

1. INFORMATION SHOWS ON THIS PLAN IS THE RESULT OF A FIELD SURVEY PERFORMED BY SPRUHAN ENGINEERING, P.C. AS OF 5/10/2025.
2. DEED REFERENCE 1: BOOK 22125, PAGE 67
PLAN REFERENCE 1: BOOK 189 PG 42
MIDDLESEX SOUTH DISTRICT REGISTRY OF DEEDS.
3. THIS PLAN IS NOT INTENDED TO BE RECORDED.
4. I CERTIFY THAT THE DWELLING SHOWN IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE. IT IS LOCATED IN ZONE X, ON FLOOD HAZARD BOUNDARY MAP NUMBER 25017C0417E, PANEL NUMBER 0417E, IN COMMUNITY NUMBER: 250177, DATED 06/04/2010.
5. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT USES OF THE LAND; HOWEVER THIS NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.
6. FIRST FLOOR ELEVATIONS ARE TAKEN AT THRESHOLD.
7. NO RESPONSIBILITY IS TAKEN FOR ZONING TABLE AS SPRUHAN ENGINEERING, P.C. ARE NOT ZONING EXPERTS. TABLE IS TAKEN FROM TABLE PROVIDED BY LOCAL ZONING ORDINANCE. CLIENT AND/OR ARCHITECT TO VERIFY THE ACCURACY OF ZONING ANALYSIS.
8. THE ELEVATIONS SHOWN ARE ON ARLINGTON DATUM.
10. ZONING DISTRICT R2 – TWO FAMILY.

CONTRACTOR SHALL FOLLOW THE PROPOSED SPOT GRADES TO ENSURE THE ACCESSIBLE PARKING SPACE AND ROUTE TO THE HOUSE ENTRANCE MAINTAIN A MAXIMUM RUNNING SLOPE OF 5% AND A MAXIMUM CROSS SLOPE OF 2%.

(IN FEET)

1 inch = 10 ft.



MBTA OVERLAY DISTRICT – NEIGHBORHOOD MULTI-FAMILY NMF			
		REQUIRED	PROPOSED
SETBACKS	FRONT (MIN)	15'	10.3'
	SIDE LEFT(MIN)	5'	16.6'
	SIDE RIGHT(MIN)	5'	5.0'
	REAR (MIN)	20'	15'
MAX. BLDG. HEIGHT		35.0'	31.48'
MAX. NO. STORIES		3	3



SHEET 1 OF 1

SS	SEWER LINE
⊙	SEWER MANHOLE
W	WATER LINE
G	GAS LINE
⌋	UTILITY POLE
SV	GAS VALVE
E	OVERHEAD ELECTRIC SERVICE
W	WATER VALVE
□	CATCH BASIN
○	FENCE
205	CONTOUR LINE (MJR)
195	CONTOUR LINE (MNR)
X	SPOT GRADE
Ⓓ	DRAIN MANHOLE
Ⓒ	CLEANOUT/ INSPECTION PORT
⌋	HYDRANT
⌋	TREE
Ⓔ	PROPOSED DOWNSPOUT
F.F.	FIRST FLOOR
B.F.	BASEMENT FLOOR
G.F.	GARAGE FLOOR
T.O.F.	TOP OF FOUNDATION
174	PROPOSED CONTOUR LINE

* PER TITLE V, SEWER FLOW RESIDENTIAL (G.P.D.)
EXISTING = (4 BEDROOMS x 110 G.P.D.) = 440 G.P.D.
PROPOSED = (10 BEDROOMS x 110 G.P.D.) = 1,100 G.P.D.
THEREFORE, PROPOSED INCREASED FLOW = 660 G.P.D.

DRAINAGE AREA SUMMARY

EXISTING ROOF AREA (HOUSE & GARAGE)= 1,250.9 S.F.
EXISTING PAVED AREA (DRIVEWAY) = 588.5 S.F.
EXISTING IMPERVIOUS AREAS
(WALKWAYS/STEPS/LANDINGS/DECK) = 715.5 S.F.
EXISTING LANDSCAPE AREAS = 2,249.1 S.F.

PROPOSED ROOF AREA (HOUSE&SHED) = 1,619.8 S.F.
PROPOSED PAVED AREA (DRIVEWAY) = 878.3 S.F.
PROPOSED IMPERVIOUS AREAS
(WALKWAYS/STEPS/LANDINGS/) = 524.8 S.F.
PROPOSED LANDSCAPE= 1,781.1 S.F.

TOTAL EXISTING IMPERVIOUS AREA = 2,554.9 S.F.
TOTAL PROPOSED IMPERVIOUS AREA = 3,022.9 S.F.

TOTAL INCREASE IN IMPERVIOUS AREA = 468 S.F.

REFER TO ARCHITECTURAL
PLANS FOR ALL ZONING
RELATED INFORMATION

FIRST FLOOR AND FOUNDATION
ELEVATIONS TO BE VERIFIED BY
ARCHITECT PRIOR TO ANY
CONCRETE BEING POURED

ALL SURFACE WATER RUNOFF SHALL
BE DIRECTED AWAY FROM BUILDING
FOUNDATION AND AWAY FROM
NEIGHBORING PROPERTY

CONTRACTOR TO NOTIFY
ENGINEER OF RECORD IF ANY
GROUNDWATER IS FOUND DURING
EXCAVATION/CONSTRUCTION

CONTRACTOR SHALL FOLLOW THE PROPOSED SPOT GRADES TO ENSURE THE ACCESSIBLE PARKING SPACE AND ROUTE TO THE HOUSE ENTRANCE MAINTAIN A MAXIMUM RUNNING SLOPE OF 5% AND A MAXIMUM CROSS SLOPE OF 2%.

(IN FEET)
1 inch = 20 ft.



1. THE CONTRACTOR SHALL REPORT TO THE OWNER AND ENGINEER OF ANY SIGNIFICANT VARIATIONS IN EXISTING SITE CONDITIONS FROM THOSE SHOWN ON THESE PLANS. ANY PROPOSED REVISIONS TO THE WORK, IF REQUIRED BY THESE SITE CONDITIONS, SHALL NOT BE UNDERTAKEN UNTIL REVIEWED AND APPROVED BY THE OWNER AND THE ENGINEER.
2. IN ORDER TO PROTECT THE PUBLIC SAFETY DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING AT ALL TIMES ALL NECESSARY SAFETY DEVICES AND PERSONNEL, WARNING LIGHTS, BARRICADES, AND POLICE OFFICERS.
3. ALL WORK SHALL CONFORM TO TOWN OF ARLINGTON GENERAL CONSTRUCTION STANDARDS.
4. THE CONTRACTOR SHALL REGULARLY INSPECT THE PERIMETER OF THE PROPERTY TO CLEAN UP AND REMOVE LOOSE CONSTRUCTION DEBRIS BEFORE IT LEAVES THE SITE. ALL DEMOLITION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE SITE TO A LEGAL DUMP SITE. ALL TRUCKS LEAVING THE SITE SHALL BE COVERED.
5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTITUTE EROSION CONTROL MEASURES ON AN AS NECESSARY BASIS, SUCH THAT EXCESSIVE SOIL EROSION DOES NOT OCCUR.
6. THE LOCATION OF UNDERGROUND UTILITIES AS REPRESENTED ON THESE PLANS IS BASED UPON PLANS AND INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES OR MUNICIPAL DEPARTMENTS SUPPLEMENTED BY FIELD IDENTIFICATION WHEREVER POSSIBLE. NO GUARANTEE IS MADE AS TO THE ACCURACY OF THESE LOCATIONS OR THAT ALL UNDERGROUND UTILITIES ARE SHOWN. THE CONTRACTOR SHALL CONTRACT DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION. DIG SAFE TELEPHONE NUMBER IS 1-800-322-4844.
7. THE CONTRACTOR SHALL VERIFY THE LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO TAPPING INTO, CROSSING OR EXTENDING THEM. IF THE NEW WORK POSES A CONFLICT WITH EXISTING UTILITIES, THE ENGINEER SHALL BE NOTIFIED PRIOR TO THE CONTRACTOR CONTINUING.
8. NO LEDGE, BOULDERS, OR OTHER UNYIELDING MATERIALS ARE TO BE LEFT WITHIN 6" OF THE WATER IN THE TRENCH, NOR ARE THEY TO BE USED FOR BACKFILL FOR THE FIRST 12" ABOVE THE PIPES.
9. PAVEMENT AREA SHALL BE PAVED TO A THICKNESS AS SHOWN ON THE PLANS MEASURED AFTER COMPACTION, WITH A BINDER COURSE AND TOP COURSE OF CLASS 1 BITUMINOUS CONCRETE PAVEMENT, TYPE 1-1.
10. BASE MATERIAL SHALL BE CLEAN BANK RUN GRAVEL, CONFORMING TO M.D.P.W. M1.03.1, WITH NO STONES LARGER THAN THREE (3) INCHES IN DIAMETER AND SHALL BE PLACED AND ROLLED WITH AT LEAST A TEN TON ROLLER. THE SURFACES SHALL BE WET DURING ROLLING TO BIND THE MATERIAL. ALL STONES OF 4" DIAMETER OR LARGER SHALL BE REMOVED FROM THE SUB-BASE PRIOR TO PLACING BASE MATERIAL.
11. ALL EXISTING PAVING TO BE DISTURBED SHALL BE CUT ALONG A STRAIGHT LINE THROUGH ITS ENTIRE THICKNESS. BUTT THE NEW PAVING INTO THE EXISTING PAVEMENT TO REMAIN.
12. ANY PAVEMENT REMOVED FOR UTILITY TRENCH EXCAVATION OR OTHERWISE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED WITH A PAVEMENT SECTION CONSISTING OF 1" WEAR COURSE OVERLYING A 1 1/2" BINDER COURSE OVERLYING A 8" COMPACTED GRAVEL BASE COURSE.
13. THE CONTRACTOR SHALL APPLY FOR A STREET OPENING AND UTILITY CONNECTION PERMITS AND SIDEWALK CROSSING PERMIT WITH THE TOWN OF ARLINGTON DPW.
14. CONTRACTOR TO ENSURE THAT ALL SURFACE WATER IS DIVERTED AWAY FROM BUILDING FOUNDATION DURING FINAL GRADING.
15. CONTRACTOR TO COORDINATE WITH THE ENGINEERING DIVISION TO PERFORM INSPECTIONS OF 1) BOTTOM OF EXCAVATION, 2) SYSTEM AFTER INSTALLED PRIOR TO BACKFILL. ENGINEERING DIVISION SHALL BE NOTIFIED AT A MINIMUM OF 24 HOURS PRIOR TO INSPECTIONS.
16. THE CONNECTION OF THE PROPOSED SUMP PUMP OR ANY FUTURE SUMP PUMP TO THE SUBSURFACE INFILTRATION SYSTEM IS PROHIBITED.
17. CONTRACTOR MUST CONTACT THE DESIGN ENGINEER AND ARLINGTON ENGINEERING DIVISION IF THE SOIL CONDITIONS FOUND DURING EXCAVATION DO NOT MATCH THE PLAN AND/OR TEST PIT INFORMATION.
18. THE TOWN OF ARLINGTON IS NOT A MEMBER OF DISCOFEE. UTILITY MARKOUTS MUST BE REQUESTED FROM THE TOWN OF ARLINGTON WATER AND SEWER DIVISION 781-316-3106 AT LEAST 72 HOURS PRIOR TO EXCAVATION.
19. CERTIFIED AS-BUILT PLANS OF THE DRAINAGE SYSTEM, INCLUDING ELEVATIONS, DIMENSIONS AND SWING TIES, AND IMPERVIOUS SURFACE AREA SHALL BE PROVIDED TO THE ARLINGTON ENGINEERING DIVISION FOLLOWING COMPLETION.

DEEP OBSERVATION HOLE LOG											
DEEP OBSERVATION HOLE NUMBER:				TP-1		GROUND ELEVATION:					35.0±
Depth (in)	Horizon/ Layer	Matrix: Color-Moist	Redoximorphic Features			Texture (USDA)	Coarse Fragments (Percent by Volume)		Structure	Consistence (Moist)	Other
			Depth (in)	Color	Percent		Gravel	Cobbles & Stones			
0-3	BIT. CONC.	--	--	--	--	--	--	--	--	--	--
3-15	A	10YR 3 3/2	--	--	--	SANDY LOAM	<5	<5	MASSIVE	FRIABLE	--
15-26	Bw	10YR 5 8/6	--	--	--	SANDY LOAM	<5	<5	MASSIVE	FRIABLE	--
26-120	C	10YR 6 3/2	84"	--	--	SAND	10	<5	SINGLE GRAINED	LOOSE	COARSE

NOTES:
1. NO WEEPING OR STANDING WATER OBSERVED.
2. REDOX OBSERVED @ 84". - ELEVATION: 28.0±
3. NO REFUSAL.
4. LOGGED BY EDMOND SPRUHAN SE 14235 ON 07/29/2025.

EDMOND SPRADHAM
CIVIL
53316
REGISTERED
PROFESSIONAL ENGINEER

CIVIL PLAN

BY	DESCRIPTION	DATE
GP	REVISED AS PER ARCHITECTURAL PLANS CHANGES	9.28.23

[illegible]

DATE:	8/1/2025
DRAWN BY:	G.P
CHECKED BY:	E.S
APPROVED BY:	E.S

SHEET 1 OF 4

1.0 GENERAL

1.1 APPLICATIONS

- INFILTRATION OF STORMWATER RUNOFF
- DETENTION OF STORMWATER RUNOFF
- RAINWATER HARVESTING AND REUSE
- SUMP PUMP AND WATER SOFTENER DISCHARGE
- POOL BACKWASH AND DRAWDOWN DISCHARGE

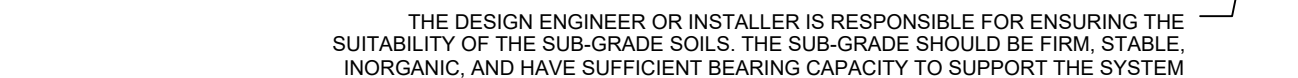
2.0 GENERAL

100

- 2.1 CHAMBER PARAMETERS**
1. THE CHAMBERS SHALL BE MANUFACTURED BY CULTEC, OF BROOKFIELD, CT (203-775-4416 OR 1-800-428-5832).
 2. THE CHAMBER SHALL BE MADE OF BLACK POLYETHYLENE.
 3. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC STORMFILTER® T-80 SHALL BE 26.38 INCHES (670 MM) TALL, 31 INCHES (787 MM) WIDE AND 42 INCHES (1067 MM) LONG.
 4. THE CHAMBER SHALL HAVE A 12.5 INCH (318 MM) DIAMETER ACCESS OPENING LOCATED AT THE TOP OF THE UNIT.
 5. MAXIMUM INLET OPENING ON THE CHAMBER WALL IS 4 INCHES (100 MM).
 6. THE NOMINAL STORAGE VOLUME OF THE STORMFILTER® T-80 SHALL BE 90 GAL / UNIT (340.7 L / UNIT).
 7. THE STORMFILTER® T-80 CHAMBER SHALL HAVE 5 CORRUGATIONS.
 8. THE STORMFILTER® T-80 SHALL HAVE A MAXIMUM FILTERING CAPACITY OF 315 L / GPM (1193 L/MIN).
 9. THE CHAMBER SHALL BE DESIGNED FOR NON-TRAFFIC APPLICATIONS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
 10. THE CHAMBER SHALL BE MANUFACTURED IN A FACILITY EMPLOYING CULTEC'S QUALITY CONTROL AND ASSURANCE PROCEDURES.

2.2 FILTERING SPECIFICATIONS

1. THE FILTER REMOVES MORE THAN 70% OF THE TOTAL SUSPENDED SOLIDS TYPICALLY PRESENT IN STORMWATER RUNOFF.
2. CONTINUOUS FILTRATION CAPABILITY FOR CLEAN FILTERS IS RATED AT 0.70 CFS (0.02 M3/S).
3. TREATMENT CAPABILITY IS APPROXIMATELY 315.1 GPM (1193 L/MIN).



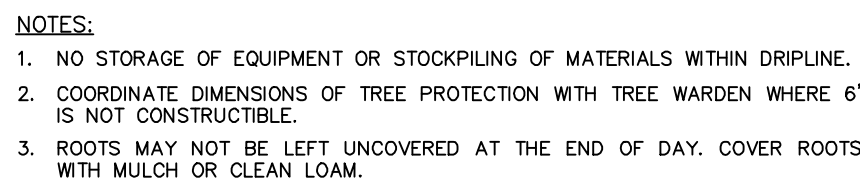
*FOR NON-TRAFFIC APPLICATIONS, THE DEPTH OF COVER ABOVE THE EMBEDMENT STONE LAYER MAY BE REDUCED TO 6.0"

****CULTEC RECOMMENDS THE USE OF THE STORMFILTER T-80 UPSTREAM OF ALL SYSTEM INLETS. THE STORMFILTER T-80 MUST BE LOCATED IN A NON-TRAFFIC AREA**

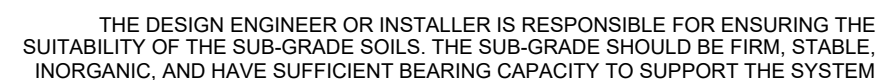


1. RECTANGULAR OR CIRCULAR BOXES ARE PERMITTED.
2. CONCRETE/FIBERLYTE BOXES ARE ACCEPTABLE IN NON-VEHICULAR AREAS. H-20 CAST IRON TRAFFIC LIDS AND BOXES IN VEHICULAR AREAS.
3. ALL CLEANOUT LIDS SHALL BE MARKED WITH AN "S" OR THE WORD "SEWER" FOR SANITARY SEWER CLEANOUTS
4. CLEANOUT PIPE SHALL BE THE SAME DIAMETER AS THE CONNECTED SITE PIPE.
5. TERMINATE C.O. AT CLOSEST JOINT TO SURFACE WITH TEMPORARY PLUG. AFTER ALL CONSTRUCTION IS COMPLETE, THE SUBSISTING AREAS TO BE PAVED, THE FINAL RISE OF PIPE AND BOX SHALL BE SUBSTANTIALLY SHOWN.

CLEANOUT TO GRADE
NTS



TREE PROTECTION DETAIL
N.T.S.



*FOR NON-TRAFFIC APPLICATIONS, THE DEPTH OF COVER ABOVE THE EMBEDMENT STONE LAYER MAY BE REDUCED TO 6.0"

SR
6.0

TYPICAL SYSTEM CROSS-SECTION DETAIL & SPECIFICATION TABLE



CULTEC INSPECTION PORT - ZOOM DETAIL

RESI
7.0

CHAMBER LENGTH DETAIL & LENGTH TABLE

Edmund T. Spruhan

18 GRAFTON STREET
ARLINGTON
MASSACHUSETTS

CIVIL PLAN

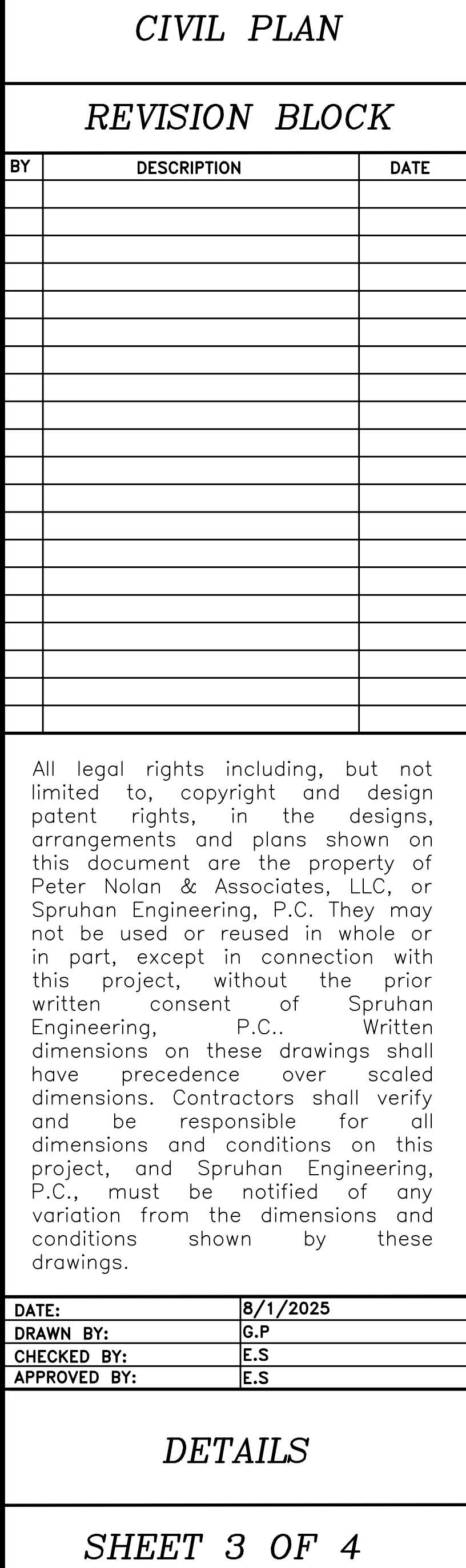
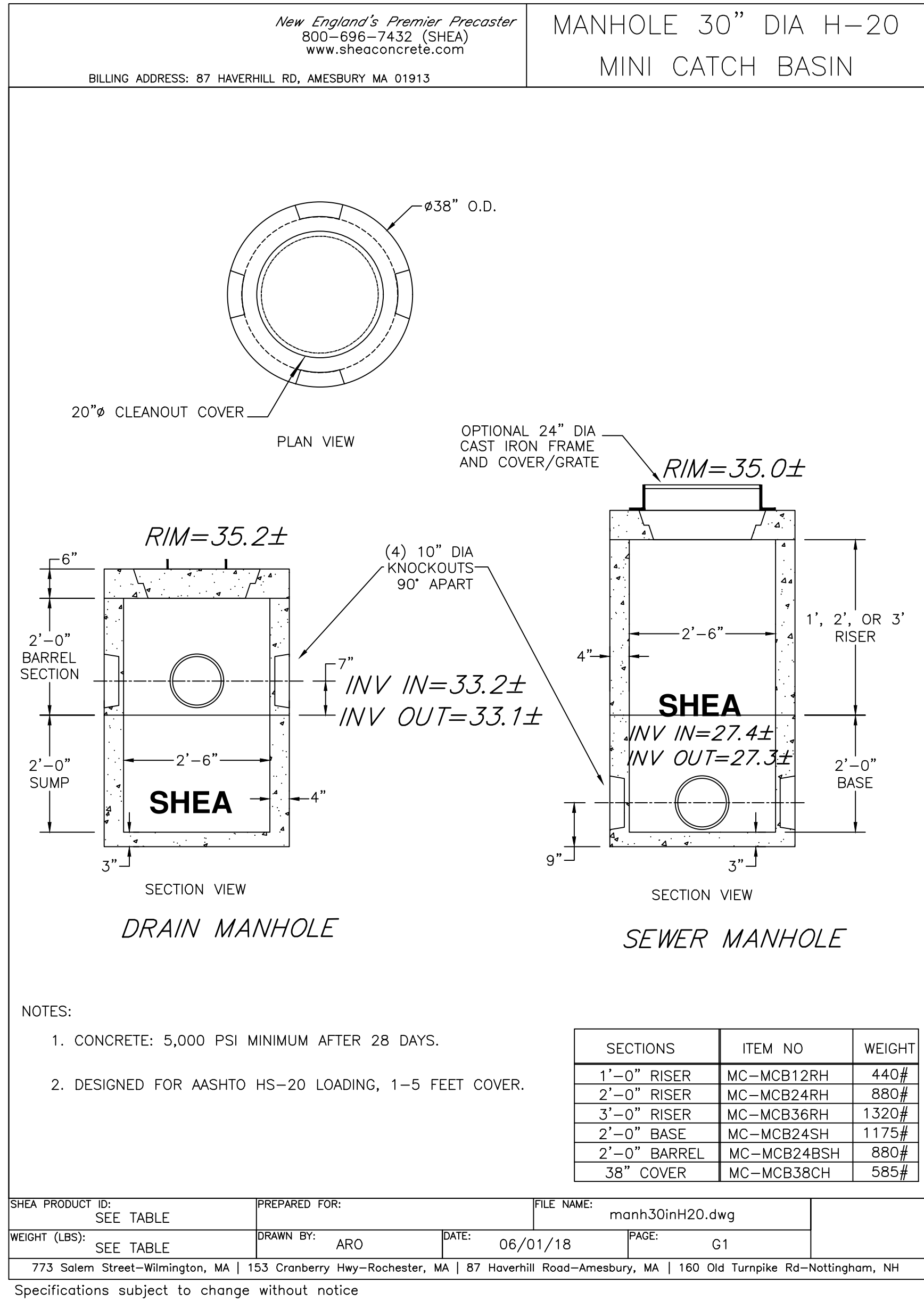
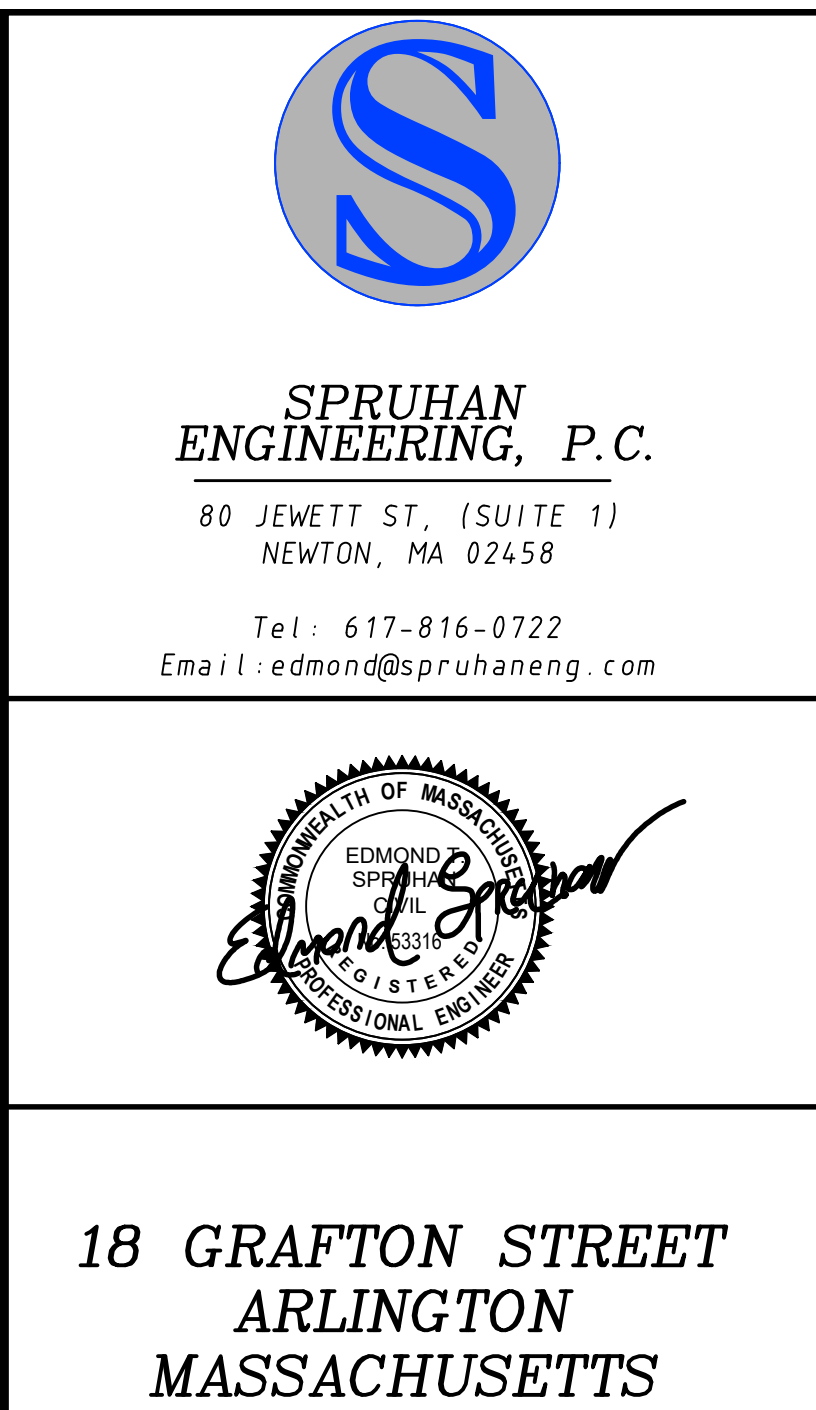
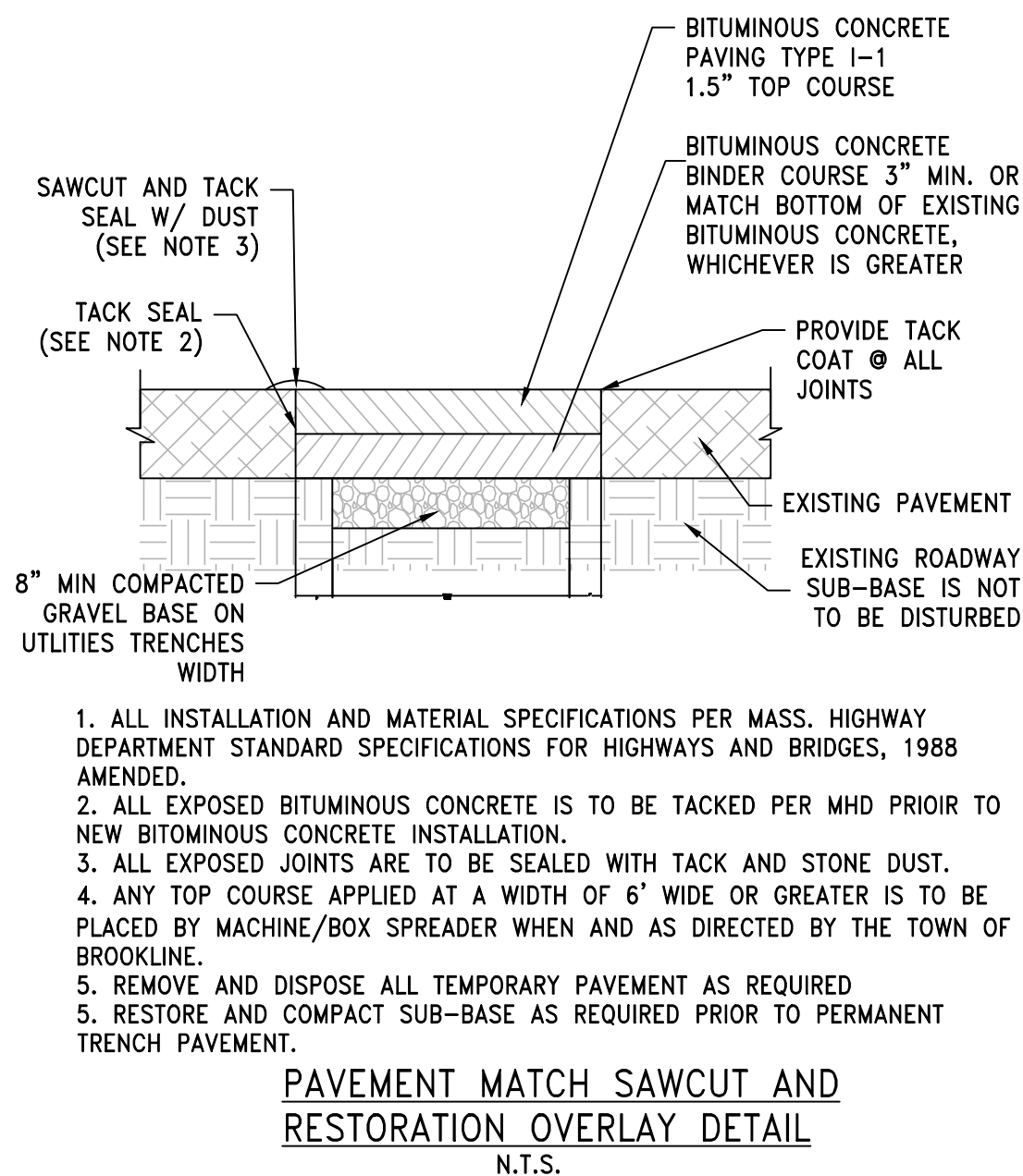
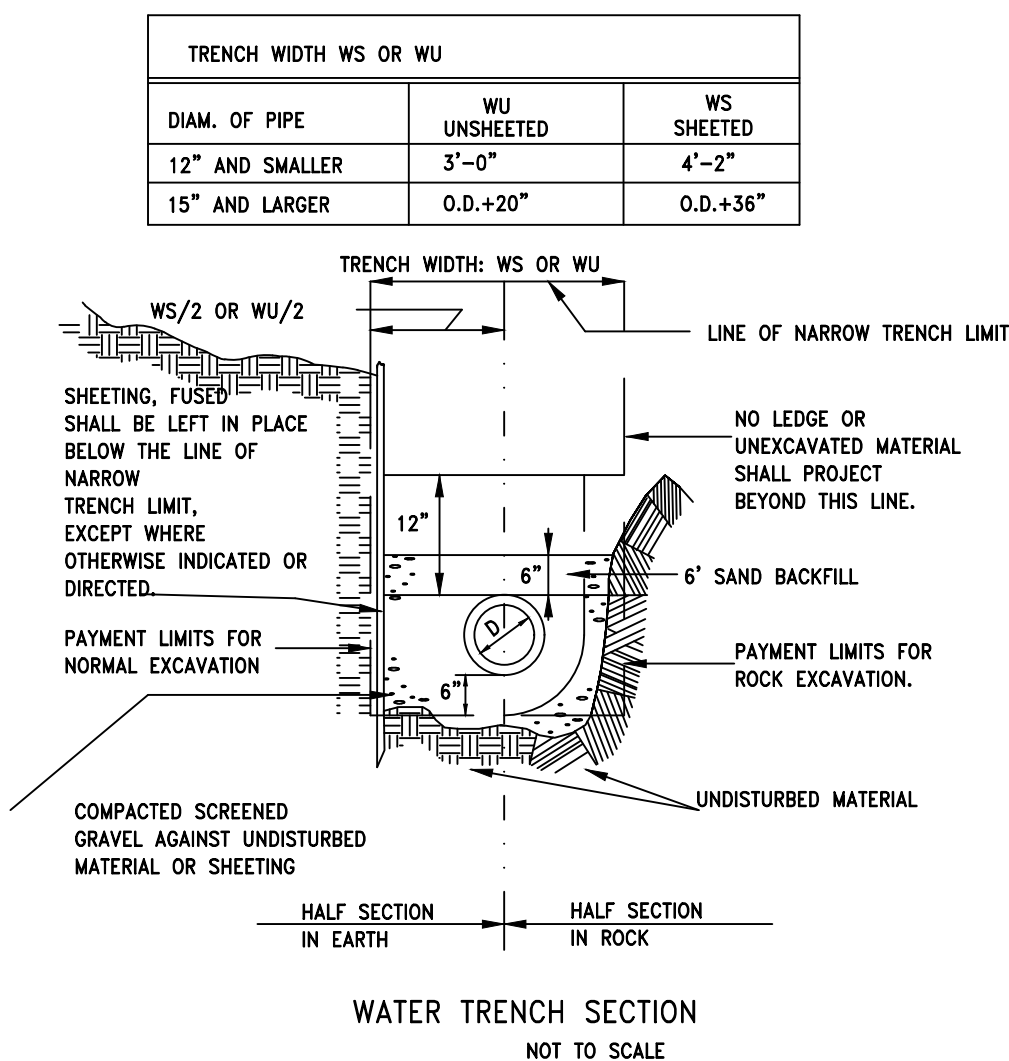
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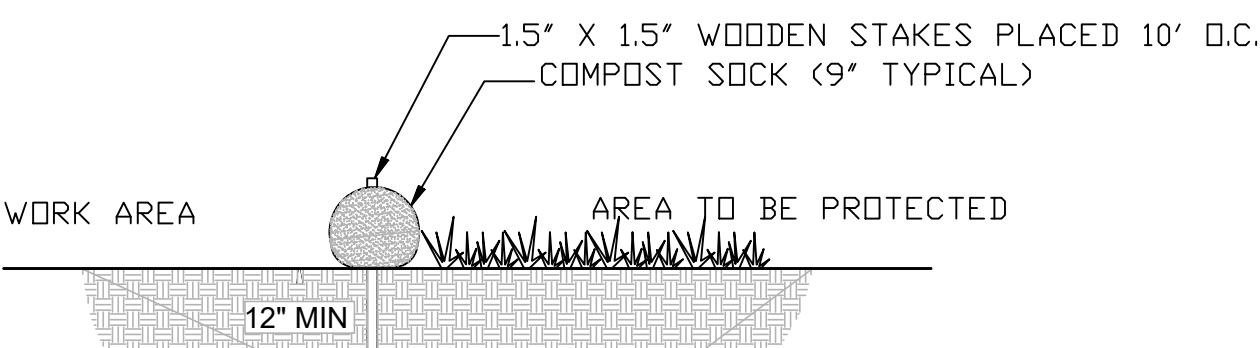
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CHECKED BY:	E.S
APPROVED BY:	E.S

DETAILS

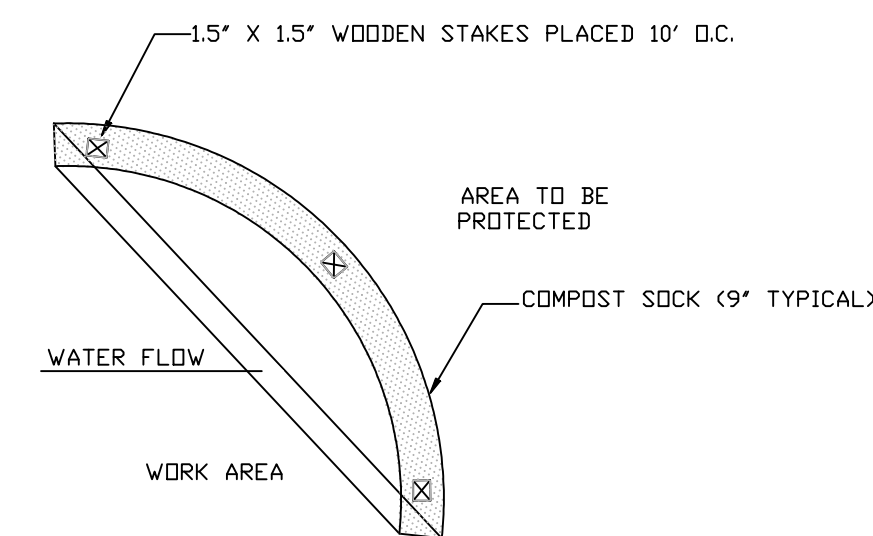
SHEET 2 OF 4



ALL EROSION MITIGATION MEASURES SHALL BE IN PLACE PRIOR TO MAJOR CONSTRUCTION OR SOIL DISTURBANCE COMMENCING ON THE SITE.



SECTION_{NTS}



PLAN NTS

- NOTES:
1. ALL MATERIAL TO MEET SPECIFICATIONS.
 2. COMPOST SOCKS FILL TO MEET APPLICATION REQUIREMENTS.
 3. FILTER MEDIA TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

COMPOST SOCK DETAIL



COMPOST SOCK INSTALLATION

1. LOCATE/MARK ANY UTILITIES.
2. CHECK ALL PERMITS.
3. OBTAIN COMPOST MEETING SPECIFICATIONS.
4. OBTAIN FILTER SOCK NETTING.
5. FILL FILTER SOCK NETTING WITH COMPOST.
6. MARK OUT AREA FOR FILTER SOCK WITH CORRECT LENGTH OF SOCK PARALLEL TO THE SLOPE SO THAT THE RUNOFF ENTERS AS SHEET FLOW.
7. IN HIGH-FLOW OR STEEP-SLOPE AREAS, ORIENT A SECOND SOCK PARALLEL TO THE FIRST TO DISSIPATE FLOWS.
8. LAY FILTER SOCK NETTING OUT AS PLANNED.
9. FILL FILTER SOCK WITH COMPOST.
10. STAKE FILTER SOCK EVERY 10 FT. STAKES SHOULD BE DRIVEN THROUGH THE CENTER OF THE SOCK AND 1 FT. AS TO THE GROUND.
11. IF SOCK NETTING MUST BE JOINED, FIT BEGINNING OF THE NEW SOCK OVER THE END OF THE OLD SOCK, OVERLAPPING BY 1-2
- ft. FILL WITH COMPOST; THEN STAKE THE JOIN.

TYPICAL MAINTENANCE SCHEDULE

INSPECT FILTER SOCKS PERIODICALLY, AND ESPECIALLY AFTER LARGE STORM EVENTS. ENSURE THAT THE FILTER SOCK IS INTACT, AND THAT THE AREA UPSTREAM HAS NOT FILLED WITH SEDIMENT. IF THE UPSTREAM AREA HAS FILLED WITH SEDIMENT, OR IF THE FILTER SOCK HAS BEEN OVERTOPPED, INSTALL ADDITIONAL FILTER SOCKS FURTHER UPSTREAM. SEDIMENT BEHIND THE SOCK SHOULD BE REMOVED WHEN THE DEPTH OF THE SEDIMENT REACHES 12 INCHES FOR AN 18-IN. SOCK, 17.5 IN. FOR A 12-IN. SOCK AND 7.25 IN. FOR A 7.25-IN. SOCK. FOR SOCKS WITH GREATER DIAMETERS, REMOVE SEDIMENT BEHIND THE SOCK WHEN THE ACCUMULATED SEDIMENT DEPTH REACHES 40 PERCENT OF THE DESIGN DIAMETER OF THE SOCK.

CONSTRUCTION MATERIALS

- ALL LOOSE STOCKPILED CONSTRUCTION MATERIALS THAT ARE NOT ACTIVELY BEING USED (I.E. SOIL, SPOILS, AGGREGATE, FLY-ASH, STUCCO, HYDRATED LIME, ETC.) SHALL BE COVERED AND BERMED.
- ALL CHEMICALS SHALL BE STORED IN WATERTIGHT CONTAINERS (WITH APPROPRIATE SECONDARY CONTAINMENT TO PREVENT ANY SPILLAGE OR LEAKAGE) OR IN A STORAGE SHED (COMPLETELY ENCLOSED).
- EXPOSURE OF CONSTRUCTION MATERIALS TO PRECIPITATION SHALL BE MINIMIZED. THIS DOES NOT INCLUDE MATERIALS AND EQUIPMENT THAT ARE DESIGNED TO BE OUTDOORS AND EXPOSED TO ENVIRONMENTAL CONDITIONS (I.E. POLES, EQUIPMENT PADS, CABINETS, CONDUCTORS, INSULATORS, BRICKS, ETC.).
- BEST MANAGEMENT PRACTICES TO PREVENT THE OFF-SITE TRACKING OF LOOSE CONSTRUCTION AND LANDSCAPE MATERIALS SHALL BE IMPLEMENTED.

EROSION CONTROL NOTES

1. THE EROSION CONTROL PLANS IN THIS SET SHALL BE REVIEWED AND IMPLEMENTED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR SHALL WORK WITH THE PROJECT'S ENGINEER THROUGHOUT CONSTRUCTION TO ENSURE THE SITE IS PROPERLY PROTECTED FROM POSSIBLE POLLUTANTS. THE ENGINEER HAS AUTHORIZATION TO ADD OR REMOVE BMP MEASURES THROUGHOUT CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING SITE EROSION CONTROL AT ALL TIMES.
3. IT SHALL BE THE RESPONSIBILITY OF THE OWNER AND THE PERMITTEE TO ENSURE THAT EROSION DOES NOT OCCUR FROM ANY ACTIVITY DURING OR AFTER PROJECT CONSTRUCTION. ADDITIONAL MEASURES, BEYOND THOSE SPECIFIED, MAY BE REQUIRED BY THE PLANNING DIRECTOR AS DEEMED NECESSARY TO CONTROL ACCELERATED EROSION.
4. AT THE END OF EACH WORKDAY, AT THE END OF EACH WORKWEEK, THE CONTRACTOR SHALL IMPLEMENT ALL TEMPORARY MEASURES NECESSARY TO PREVENT EROSION AND SILTATION, UNTIL THE PROJECT HAS BEEN FINALIZED. THESE MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, DIRECT SEEDING OF THE AFFECTED AREAS, STRAW MULCHING, AND/OR INSTALLATION OF STRAW BALES DAMS/SILT FENCES.
5. DURING CONSTRUCTION, NO TURBID WATER SHALL BE PERMITTED TO LEAVE THE SITE. USE OF SILT AND GREASE TRAPS, FILTER BERMS, HAY BALES OR SILT FENCES SHALL BE USED TO PREVENT SUCH DISCHARGE.
6. ALL AREAS ON- AND OFF-SITE EXPOSED DURING CONSTRUCTION ACTIVITIES, IF NOT PERMANENTLY LANDSCAPED PER PLAN, SHALL BE PROTECTED BY MULCHING AND/OR SEEDING.
7. ALL EXCAVATED MATERIAL SHALL BE REMOVED TO AN APPROVED DISPOSAL SITE OR DISPOSED OF ON-SITE IN A MANNER THAT WILL NOT CAUSE EROSION.
8. ANY MATERIAL STOCKPILED, FOR LONGER THAN 14 DAYS, DURING CONSTRUCTION SHALL BE COVERED WITH PLASTIC.
9. UPON COMPLETION OF CONSTRUCTION, ALL REMAINING EXPOSED SOILS SHALL BE PERMANENTLY REVEGETATED.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ADDITIONAL MEASURES NECESSARY TO CONTROL SITE EROSION AND PREVENT SEDIMENT TRANSPORT OFF-SITE ARE IMPLEMENTED.
11. ALL SPILLS AND/OR LEAKS SHALL BE IMMEDIATELY CLEANED UP AND MITIGATED.

VEHICLE STORAGE AND MAINTENANCE

- MEASURES SHALL BE TAKEN TO PREVENT OIL, GREASE, OR FUEL TO LEAK IN TO THE GROUND, STORM DRAINS OR SURFACE WATERS.
- ALL EQUIPMENT OR VEHICLES, WHICH ARE TO BE FUELED, MAINTAINED AND STORED ONSITE SHALL BE IN A DESIGNATED AREA FITTED WITH APPROPRIATE BMPs.
- LEAKS SHALL BE IMMEDIATELY CLEANED AND LEAKED MATERIALS SHALL BE DISPOSED OF PROPERLY.

LANDSCAPE MATERIALS

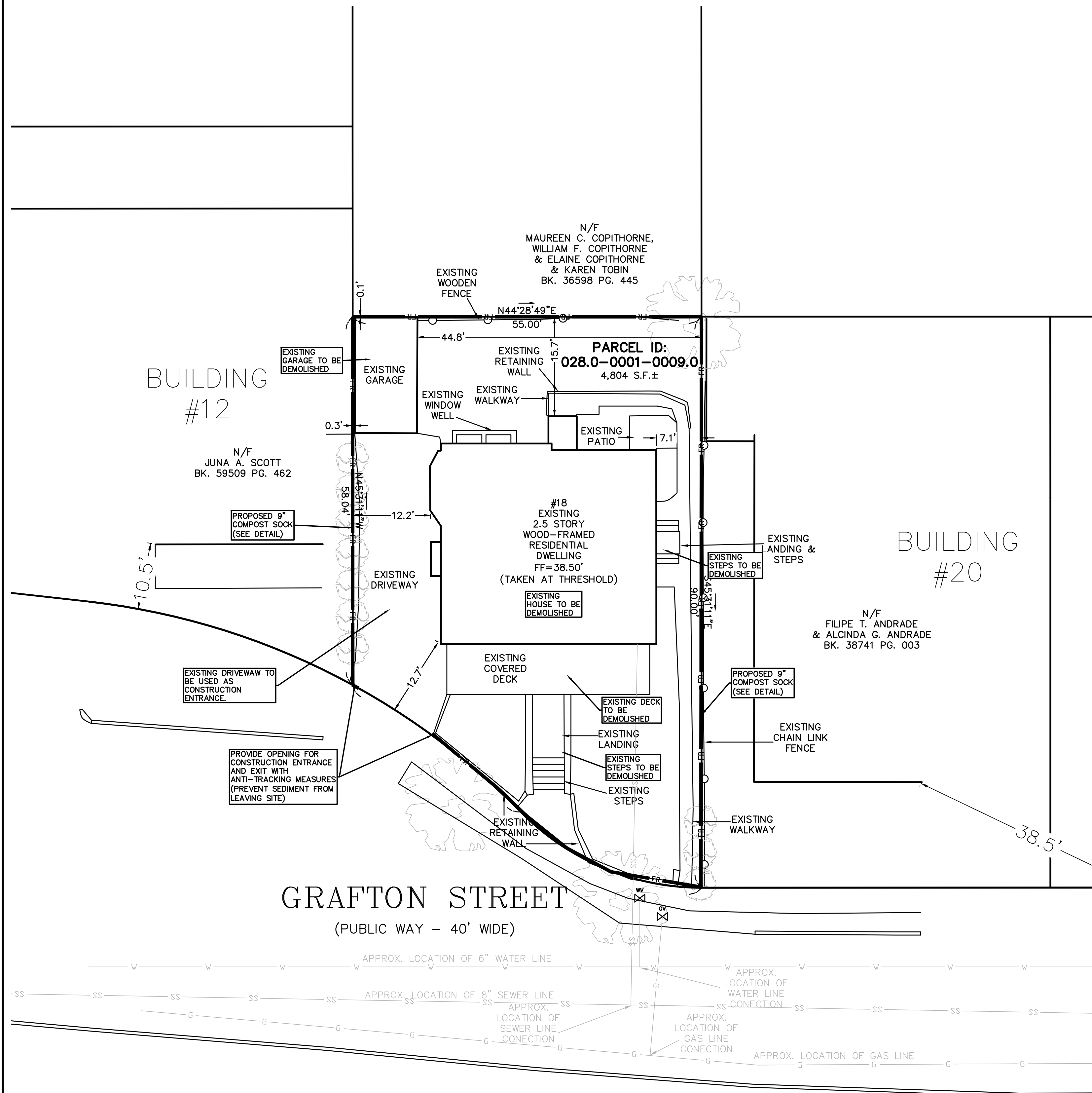
- CONTAIN STOCKPILED MATERIALS SUCH AS MULCHES AND TOPSOIL WHEN THEY ARE NOT ACTIVELY BEING USED
- CONTAIN FERTILIZERS AND OTHER LANDSCAPE MATERIALS WHEN THEY ARE NOT ACTIVELY BEING USED.
- DISCONTINUE THE APPLICATION OF ANY ERODIBLE LANDSCAPE MATERIAL WITHIN 2 DAYS BEFORE A FORECASTED RAIN EVENT OR DURING PERIODS OF PRECIPITATION.
- APPLY ERODIBLE LANDSCAPE MATERIAL AT QUANTITIES AND APPLICATION RATES ACCORDING TO MANUFACTURE RECOMMENDATIONS OR BASED ON WRITTEN SPECIFICATIONS BY KNOWLEDGEABLE AND EXPERIENCED FIELD PERSONNEL.
- STACK ERODIBLE LANDSCAPE MATERIAL ON PALLETS AND COVERING OR STORING SUCH MATERIALS WHEN NOT BEING USED OR APPLIED.

WASTE MANAGEMENT

- DISPOSAL OF ANY RINSE OR WASH WATERS OR MATERIALS ON IMPERVIOUS OR PERVIOUS SITE SURFACES OR INTO THE STORM DRAIN SYSTEM SHALL BE PREVENTED.
- SANITATION FACILITIES SHALL BE CONTAINED (E.G. PORTABLE TOILETS) TO PREVENT DISCHARGES OF POLLUTANTS TO THE STORM WATER DRAINAGE SYSTEM OR RECEIVING WATER, AND SHALL BE LOCATED A MINIMUM 20 FEET AWAY FROM AN INLET, STREET OR DRIVEWAY, STREAM, RIPARIAN AREA OR OTHER DRAINAGE FACILITY.
- SANITATION FACILITIES SHALL BE INSPECTED REGULARLY FOR LEAKS AND SPILLS AND CLEANED OR REPLACED AS NECESSARY.
- COVER WASTE DISPOSAL CONTAINERS AT THE END OF EVERY BUSINESS DAY AND DURING A RAIN EVENT.
- DISCHARGES FROM WASTE DISPOSAL CONTAINERS TO THE STORM WATER DRAINAGE SYSTEM OR RECEIVING WATER SHALL BE PREVENTED.
- STOCKPILED WASTE MATERIAL SHALL BE CONTAINED AND SECURELY PROTECTED FROM WIND AND RAIN AT ALL TIMES UNLESS ACTIVELY BEING USED.

PROCEDURES THAT EFFECTIVELY ADDRESS HAZARDOUS AND NON-HAZARDOUS SPILLS SHALL BE IMPLEMENTED. EQUIPMENT AND MATERIALS FOR CLEANUP OF SPILLS SHALL BE AVAILABLE ON SITE AND THAT SPILLS AND LEAKS SHALL BE CLEANED UP IMMEDIATELY AND DISPOSED OF PROPERLY; AND

- CONCRETE WASHOUT AREAS AND OTHER WASHOUT AREAS THAT MAY CONTAIN ADDITIONAL POLLUTANTS SHALL BE CONTAINED SO THERE IS NO DISCHARGE INTO THE UNDERLYING SOIL AND ONTO THE SURROUNDING AREAS.



GRAPHIC SCALE



(IN FEET)
1 inch = 10 ft.



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18 GRAFTON STREET
ARLINGTON
MASSACHUSETTS

REVISION BLOCK

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CHECKED BY:	E.S
APPROVED BY:	E.S

EROSION CONTROL & DEMOLITION PLAN

SHEET 4 OF 4



Sustainable Building and Site Design Elements

Project: 18 Grafton Street, Arlington, MA

Use: New 4-Unit Residential Building

Conditioned Space: 5,590 SF

Prepared By: MGD+ LLC / Derek Rubinoff

Solar Energy Systems Assessment (Arlington Zoning Bylaw §6.4)

The proposed 4-unit residential development will comply with the solar energy system assessment requirements outlined in Section 6.4 of the Arlington Zoning Bylaw. The building includes a flat roof structure above the third floor, with a southeast-facing orientation and good solar access for the majority of the day.

- The project will provide over 600 SF of contiguous, unobstructed solar-ready roof area, exceeding the minimum required by code.
- Roof penetrations (e.g., vents and mechanical equipment) will be grouped to maintain a clear solar zone.
- Some partial shading is anticipated from mature trees to the northwest and south, but the primary solar window remains largely unobstructed.
- The project will not seek an exemption under §6.4.2 and will instead include full solar-ready infrastructure per 225 CMR 23.4.2 and 225 CMR 24.06, including:
 - Structural roof design to support future PV systems
 - Conduit installed from roof to main electrical panel
 - Reserved electrical panel space and labeled breaker for PV connection

Energy Code Compliance

The project will comply with the Massachusetts Specialized Stretch Energy Code (225 CMR 23), adopted by the Town of Arlington. As a new construction, all-electric residential building under 12,000 SF of conditioned space, the project will utilize the Energy Rating Index (ERI) compliance path under 225 CMR 23.4.1.





- The building will achieve a Home Energy Rating System (HERS) Index score of 45 or lower, as required for all-electric new construction.
- A certified HERS rater will verify compliance through energy modeling, inspections, and blower door testing.

Energy Efficiency Measures:

The following strategies will be implemented to meet or exceed the performance requirements of the 2021 IECC, 780 CMR, and 225 CMR 23:

- **Code-compliant envelope insulation:** All above- and below-grade assemblies will meet or exceed prescribed R-values and U-factors for Climate Zone 5A.
- **High-efficiency or low U-value windows:** Fenestration will comply with or exceed energy performance criteria for U-factor and SHGC.
- **Ducted electric heat pump systems for HVAC:** High-efficiency air-source heat pumps with sealed ductwork will serve all units.
- **Heat pump water heaters:** Domestic hot water will be provided by ENERGY STAR-certified electric heat pump systems.
- **Balanced ventilation via HRV or ERV per ASHRAE 62.2:** Each dwelling unit will have continuous mechanical ventilation with energy recovery to ensure indoor air quality and energy performance.
- **ENERGY STAR lighting and appliances:** All lighting and major appliances will be high-efficiency models meeting ENERGY STAR certification.
- **Air-sealing to achieve ≤ 3.0 ACH50:** Blower door testing will confirm air leakage meets or exceeds the maximum rate allowed under IECC/MA amendments.
- **Full compliance with 2021 IECC and 780 CMR amendments:** All relevant prescriptive and performance measures for low-rise multifamily buildings will be satisfied.

Electric Vehicle Charging Infrastructure

The building will comply with EV-readiness requirements of 225 CMR 23.4.3.2 and local Arlington preferences for electrification:





- One EV-ready parking space per dwelling unit (4 total) will be provided.
- Each EV-ready space will include:
 - A 40-amp, 208/240V dedicated circuit
 - An installed junction box or outlet in proximity to the parking space
 - Proper labeling and reserved breaker space in the electrical panel
- Electrical service will be sized to support future Level 2 charging equipment.

LEED Checklist

This project will not pursue LEED certification, nor submit a LEED checklist. However, it will fully comply with the minimum and performance-based requirements of the Massachusetts Specialized Stretch Code, 2021 IECC, and 780 CMR, and has been designed to support long-term sustainability and electrification consistent with state and municipal goals.

ARCHITECTURAL
HABITAT
DESIGN
CONSULTATION

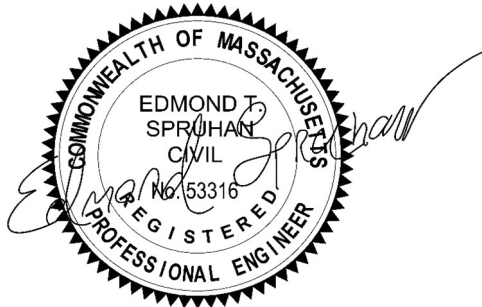


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SPRUHAN ENGINEERING, P.C.

STORMWATER REPORT

18 GRAFTON ST, ARLINGTON, MA



**Prepared By: Spruhan Engineering, P.C.
July 21, 2025.**

1.0	Introduction.....	3
2.0	Existing Conditions.....	3
2.1	Existing Topography and Drainage Infrastructure.....	3
3.0	Proposed Conditions.....	4
3.1	Project Description.....	4
3.2	Storm Water Runoff	4
3.3	Infiltration system	4
4.0	Soil Information	5
	Appendix A – HydroCAD Calculations.....	9
	Appendix B – Soils Information	67

1.0 Introduction

Spruhan Engineering, P.C. has prepared this Stormwater Report for the proposed development at 18 Grafton St, Arlington, Massachusetts.

The project includes a 4-Unit residential building a paved driveway, walkways, steps, landings, and landscaped areas. This report aims to demonstrate that the proposed development will not increase the flow rate or runoff from the site. This is accomplished through the installation of a subsurface infiltration system.

2.0 Existing Conditions

The property at 18 Grafton St, Arlington, Massachusetts, is surrounded by residential dwellings at the rear and sides. It is situated on Grafton Street, between Massachusetts Ave and Raleigh St. The existing site features a roof area of 1,251 S.F., a paved driveway of 589 S.F., additional impervious areas totaling 715 S.F., and a landscaped area covering 2,249S.F.

2.1 Existing Topography and Drainage Infrastructure.

In general, the property slopes from Rear from the rear (North) to the front (South) at approximately 2%. Since no drainage system is currently in place, all stormwater flows across the surface at grade toward Grafton St.

3.0 Proposed Conditions

3.1 Project Description

The proposed development includes a 4-Unit Residential dwelling, a paved driveway, pavers walkways, steps with landings, and landscaped areas. The planned roof area will cover 1,620 S.F., while the paved driveway will span 878 S.F. The unconnected impervious areas will total 525 S.F., The remaining landscaped portion will cover 1,781 S.F.

3.2 Storm Water Runoff

HydroCAD was used to model the site for the existing and proposed conditions for the 2-year, 10-year, 25-year, and 100-year type III storm events based on Atlas-14 Rain information for Middlesex County Central Area. HydroCAD calculations can be seen in Appendix A. The following table shows a summary of the existing and proposed conditions on the site as they relate to flowrate and volume of storm water runoff for each of the storm events.

3.3 Infiltration system

An infiltration system has been proposed to manage runoff from the new roof and the proposed driveway. The system consists of 4 Cultec C-100HD units with a 1-foot crushed stone base.

The table below provides a summary of the results obtained from HydroCAD calculations for Runoff flow rate volume and flow rate under both pre & post-construction conditions. For a detailed breakdown of the calculations, please refer to Appendix A of this report.

<u>Summary Table (HydroCAD results)</u>				
Storm Event	Runoff rate		Volume of runoff	
	Existing (CFS)	Proposed (CFS)	Existing (CF)	Proposed (CF)
2-Year	0.11	0.00	348	37
10-Year	0.28	0.27	863	305
25-Year	0.41	0.39	1,235	519
100-Year	0.62	0.57	1,843	889

4.0 Soil Information

The NRCS Web Soil Survey shows the division of two Map Units inside our area of interest. These are listed next and the percentages of Area of Interest in the Map unit Legend Table:

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
104D	Hollis-Rock outcrop-Charlton complex, 15 to 35 percent slopes	0.2	23.9%
630C	Charlton-Hollis-Urban land complex, 3 to 15 percent slopes	0.7	76.1%
Totals for Area of Interest		0.9	100.0%

Soil type 602 (Urban Land) does not have an assigned Hydrologic Soil Group (HSG). However, a test pit was conducted on the lot, and sand was encountered, which qualifies as **HSG A**. These characteristics were used in the HydroCAD model to represent site conditions. Refer to the information provided in Appendix B. Also, the test pit results can be found on sheet 1 of the civil plans provided with this report.

Appendix A – HydroCAD Calculations

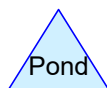
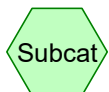


SC-1



DISCHARGE POINT
(STREET)

EXISTING CONDITIONS



Routing Diagram for EXISTING

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Page 2

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
2,249	39	>75% Grass cover, Good, HSG A (SC1)
716	98	Existing Walway, steps & Landings (SC1)
589	98	Existing paved driveway (SC1)
1,251	98	Roof (Existing house & Garage) (SC1)
4,805	70	TOTAL AREA

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Page 3

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
2,249	HSG A	SC1
0	HSG B	
0	HSG C	
0	HSG D	
2,556	Other	SC1
4,805		TOTAL AREA

EXISTING*Type III 24-hr 2-Year Rainfall=3.27"*

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Time span=0.00-30.00 hrs, dt=0.01 hrs, 3001 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SC1: SC-1

Runoff Area=4,805 sf 53.19% Impervious Runoff Depth=0.87"

Tc=5.0 min CN=70 Runoff=0.11 cfs 348 cf

Link DP: DISCHARGE POINT (STREET)

Inflow=0.11 cfs 348 cf

Primary=0.11 cfs 348 cf

Total Runoff Area = 4,805 sf Runoff Volume = 348 cf Average Runoff Depth = 0.87"
46.81% Pervious = 2,249 sf 53.19% Impervious = 2,556 sf

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Type III 24-hr 2-Year Rainfall=3.27"

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Page 5

Summary for Subcatchment SC1: SC-1

Runoff = 0.11 cfs @ 12.08 hrs, Volume= 348 cf, Depth= 0.87"

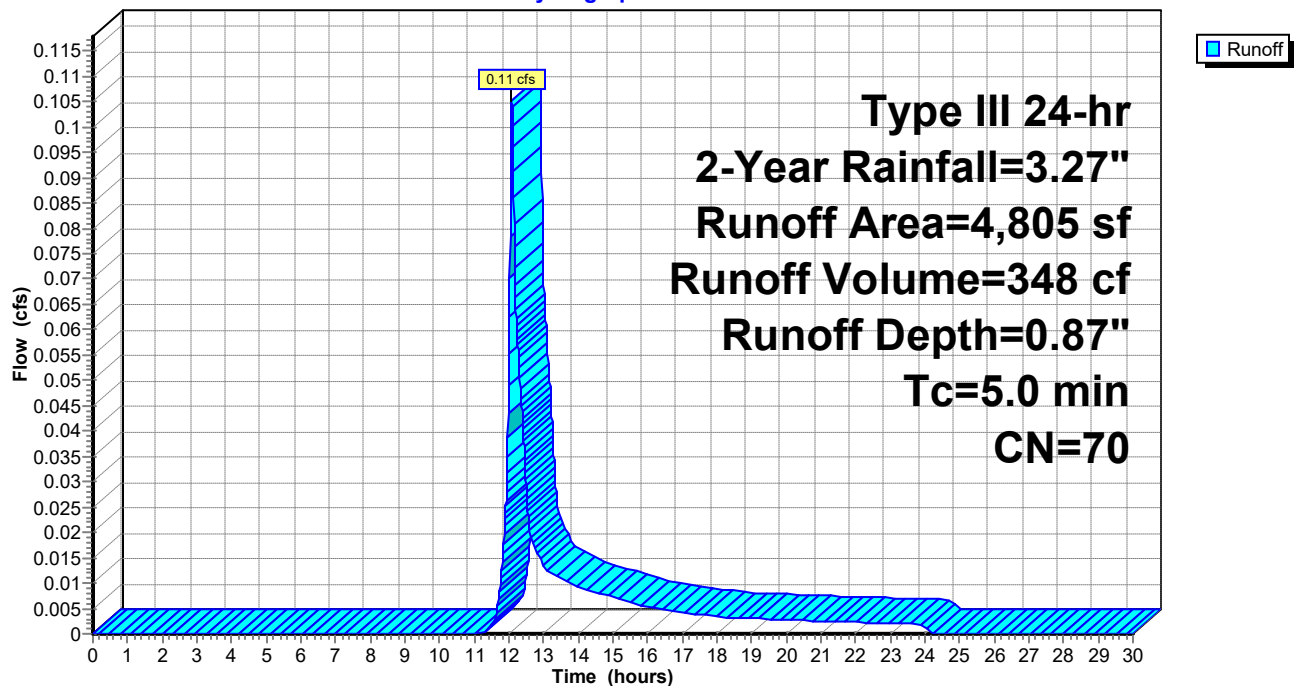
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.27"

	Area (sf)	CN	Description
*	1,251	98	Roof (Existing house & Garage)
*	589	98	Existing paved driveway
*	716	98	Existing Walway, steps & Landings
	2,249	39	>75% Grass cover, Good, HSG A
	4,805	70	Weighted Average
	2,249		46.81% Pervious Area
	2,556		53.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment SC1: SC-1

Hydrograph



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Type III 24-hr 2-Year Rainfall=3.27"

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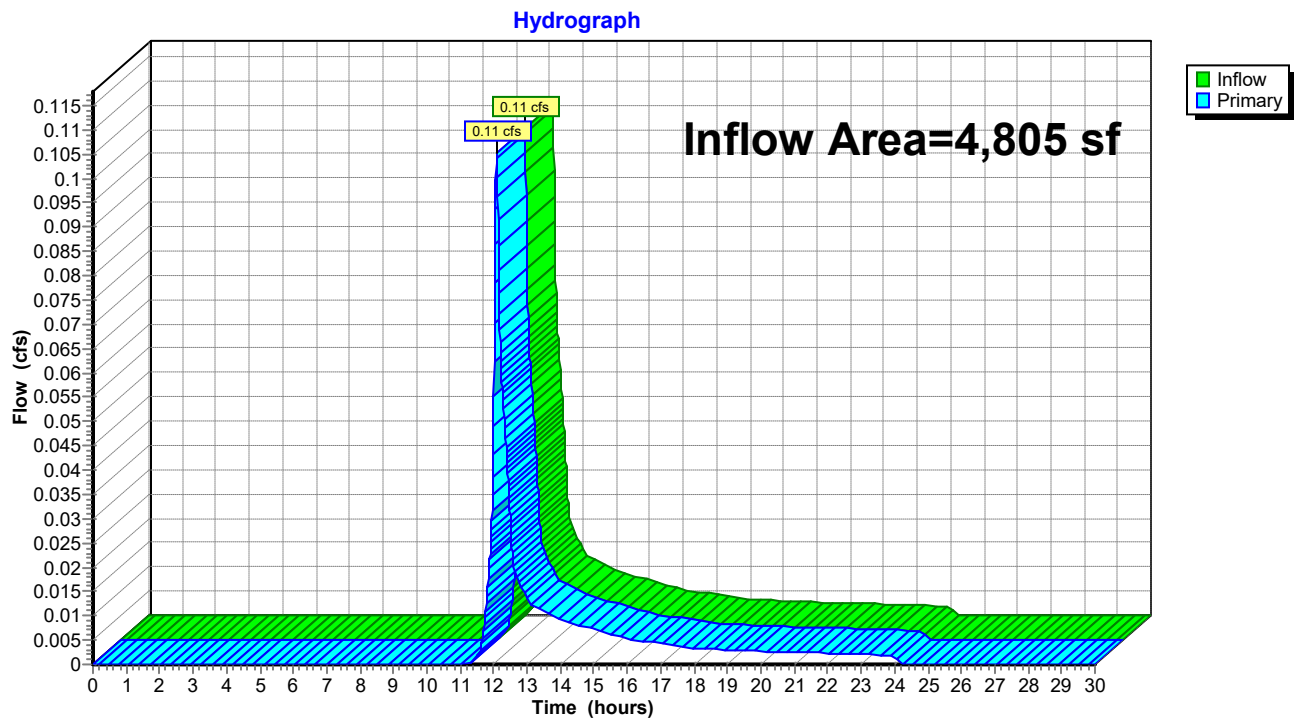
Page 6

Summary for Link DP: DISCHARGE POINT (STREET)

Inflow Area = 4,805 sf, 53.19% Impervious, Inflow Depth = 0.87" for 2-Year event
Inflow = 0.11 cfs @ 12.08 hrs, Volume= 348 cf
Primary = 0.11 cfs @ 12.08 hrs, Volume= 348 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

Link DP: DISCHARGE POINT (STREET)



EXISTING*Type III 24-hr 10-Year Rainfall=5.16"*

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Time span=0.00-30.00 hrs, dt=0.01 hrs, 3001 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SC1: SC-1

Runoff Area=4,805 sf 53.19% Impervious Runoff Depth=2.16"

Tc=5.0 min CN=70 Runoff=0.28 cfs 863 cf

Link DP: DISCHARGE POINT (STREET)

Inflow=0.28 cfs 863 cf

Primary=0.28 cfs 863 cf

Total Runoff Area = 4,805 sf Runoff Volume = 863 cf Average Runoff Depth = 2.16"
46.81% Pervious = 2,249 sf 53.19% Impervious = 2,556 sf

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Type III 24-hr 10-Year Rainfall=5.16"

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Page 8

Summary for Subcatchment SC1: SC-1

Runoff = 0.28 cfs @ 12.08 hrs, Volume= 863 cf, Depth= 2.16"

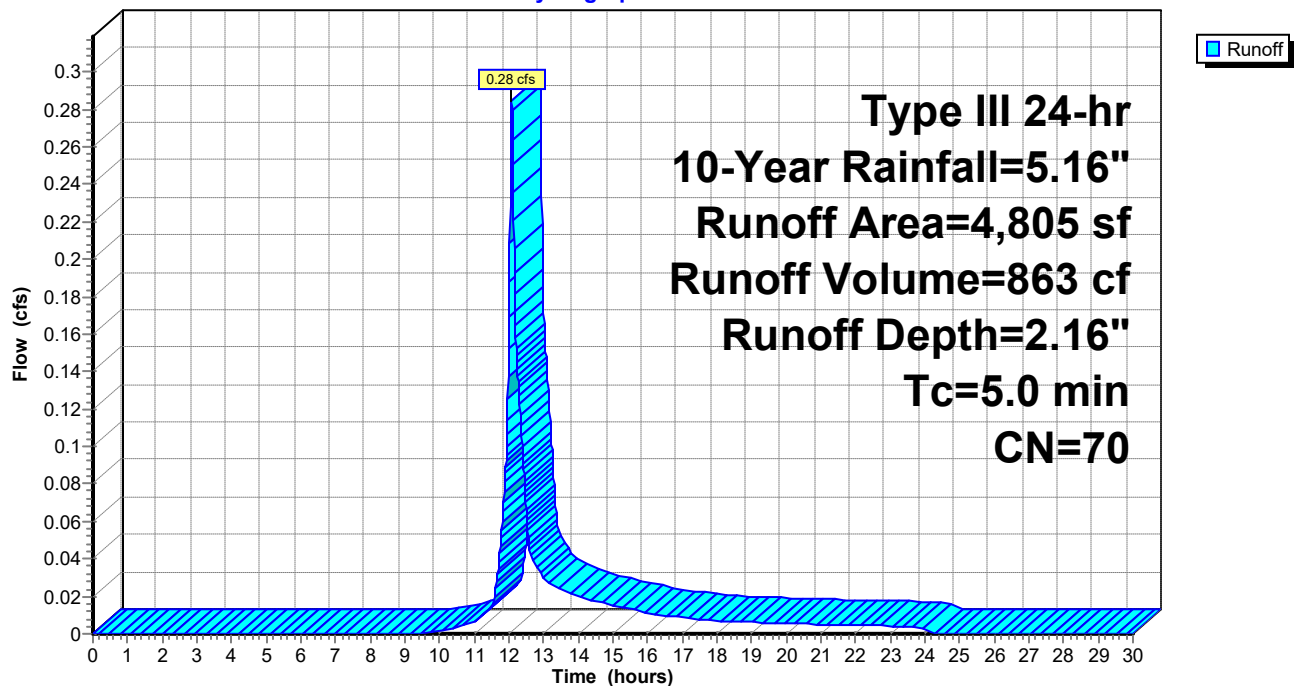
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=5.16"

	Area (sf)	CN	Description
*	1,251	98	Roof (Existing house & Garage)
*	589	98	Existing paved driveway
*	716	98	Existing Walway, steps & Landings
	2,249	39	>75% Grass cover, Good, HSG A
	4,805	70	Weighted Average
	2,249		46.81% Pervious Area
	2,556		53.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment SC1: SC-1

Hydrograph



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Type III 24-hr 10-Year Rainfall=5.16"

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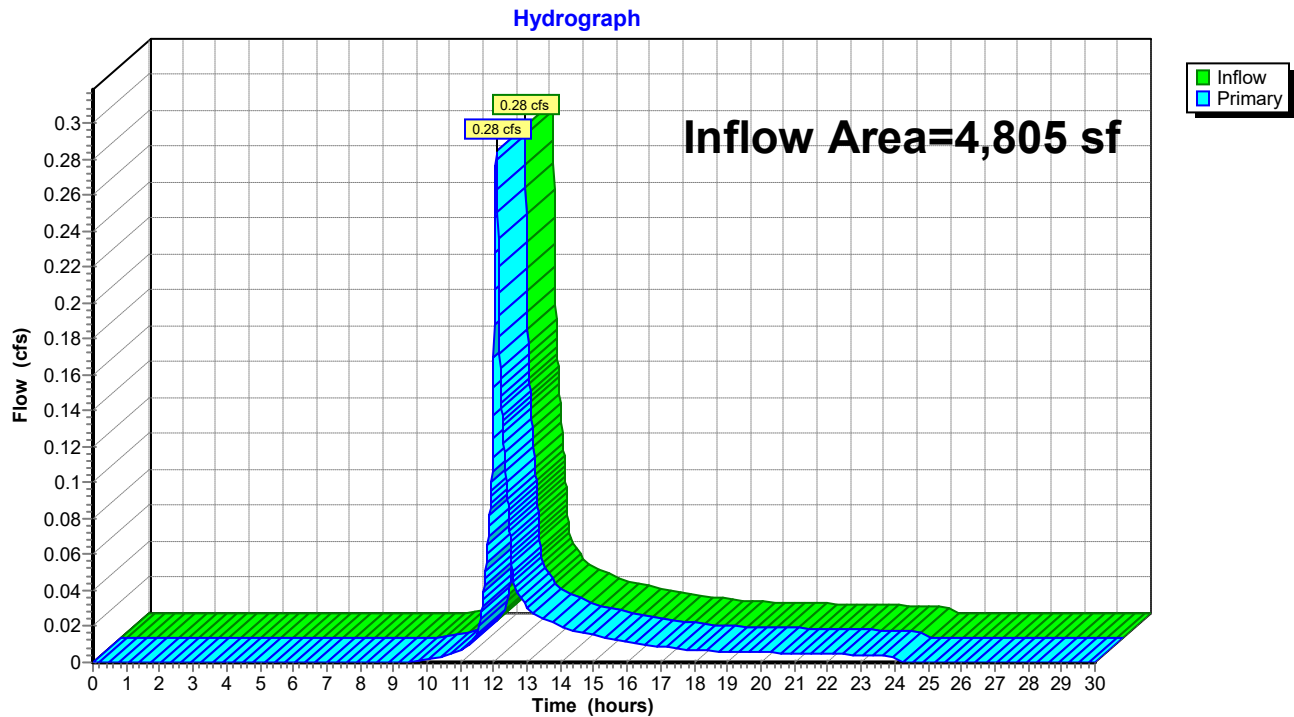
Page 9

Summary for Link DP: DISCHARGE POINT (STREET)

Inflow Area = 4,805 sf, 53.19% Impervious, Inflow Depth = 2.16" for 10-Year event
Inflow = 0.28 cfs @ 12.08 hrs, Volume= 863 cf
Primary = 0.28 cfs @ 12.08 hrs, Volume= 863 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

Link DP: DISCHARGE POINT (STREET)



EXISTING*Type III 24-hr 25-Year Rainfall=6.35"*

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Page 10

Time span=0.00-30.00 hrs, dt=0.01 hrs, 3001 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SC1: SC-1

Runoff Area=4,805 sf 53.19% Impervious Runoff Depth=3.09"

Tc=5.0 min CN=70 Runoff=0.41 cfs 1,235 cf

Link DP: DISCHARGE POINT (STREET)

Inflow=0.41 cfs 1,235 cf

Primary=0.41 cfs 1,235 cf

Total Runoff Area = 4,805 sf Runoff Volume = 1,235 cf Average Runoff Depth = 3.09"
46.81% Pervious = 2,249 sf 53.19% Impervious = 2,556 sf

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Type III 24-hr 25-Year Rainfall=6.35"

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Page 11

Summary for Subcatchment SC1: SC-1

Runoff = 0.41 cfs @ 12.08 hrs, Volume= 1,235 cf, Depth= 3.09"

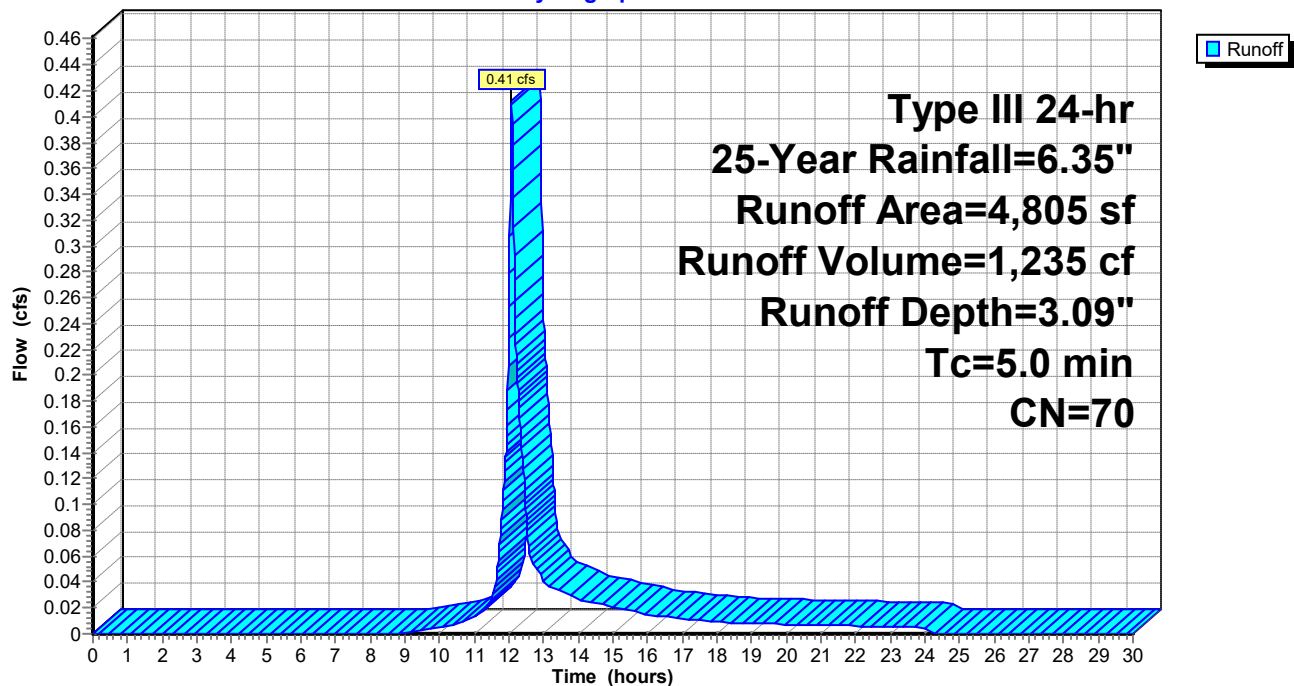
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.35"

	Area (sf)	CN	Description
*	1,251	98	Roof (Existing house & Garage)
*	589	98	Existing paved driveway
*	716	98	Existing Walway, steps & Landings
	2,249	39	>75% Grass cover, Good, HSG A
	4,805	70	Weighted Average
	2,249		46.81% Pervious Area
	2,556		53.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment SC1: SC-1

Hydrograph



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Type III 24-hr 25-Year Rainfall=6.35"

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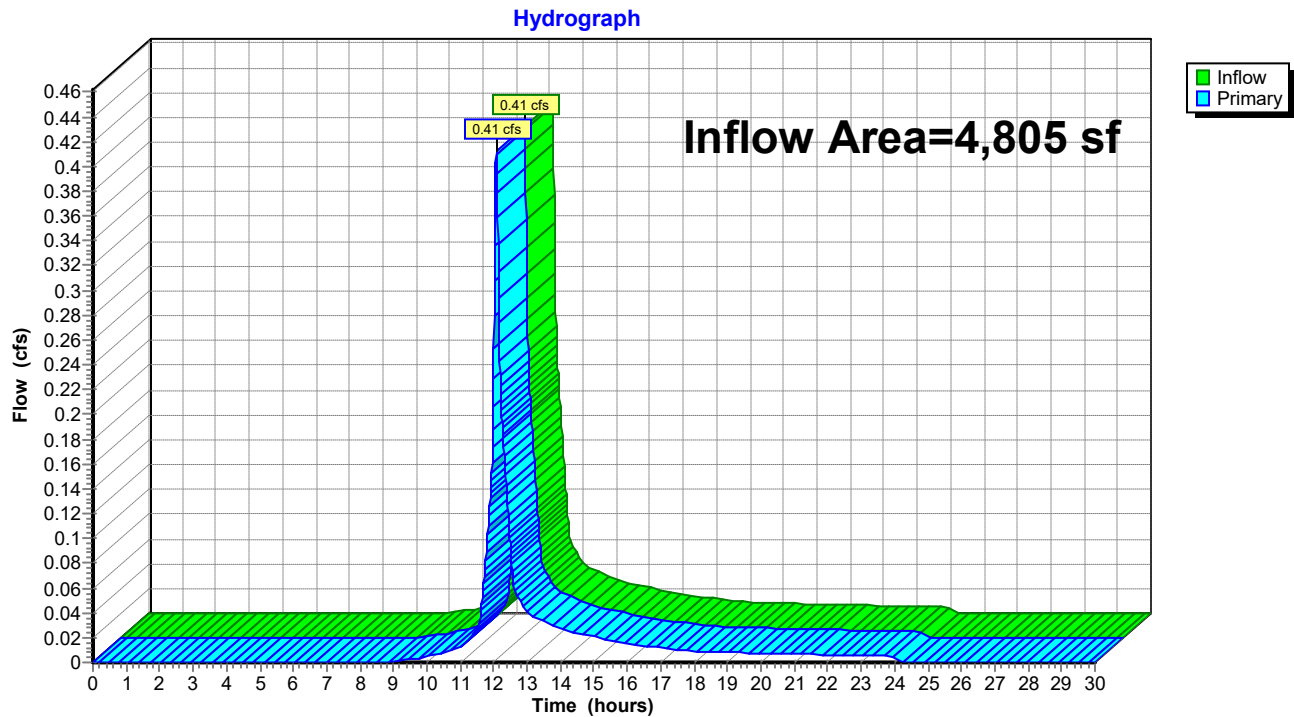
Page 12

Summary for Link DP: DISCHARGE POINT (STREET)

Inflow Area = 4,805 sf, 53.19% Impervious, Inflow Depth = 3.09" for 25-Year event
Inflow = 0.41 cfs @ 12.08 hrs, Volume= 1,235 cf
Primary = 0.41 cfs @ 12.08 hrs, Volume= 1,235 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

Link DP: DISCHARGE POINT (STREET)



EXISTING*Type III 24-hr 100-Year Rainfall=8.16"*

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Page 13

Time span=0.00-30.00 hrs, dt=0.01 hrs, 3001 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SC1: SC-1

Runoff Area=4,805 sf 53.19% Impervious Runoff Depth=4.60"

Tc=5.0 min CN=70 Runoff=0.62 cfs 1,843 cf

Link DP: DISCHARGE POINT (STREET)

Inflow=0.62 cfs 1,843 cf

Primary=0.62 cfs 1,843 cf

Total Runoff Area = 4,805 sf Runoff Volume = 1,843 cf Average Runoff Depth = 4.60"
46.81% Pervious = 2,249 sf 53.19% Impervious = 2,556 sf

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Type III 24-hr 100-Year Rainfall=8.16"

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Page 14

Summary for Subcatchment SC1: SC-1

Runoff = 0.62 cfs @ 12.07 hrs, Volume= 1,843 cf, Depth= 4.60"

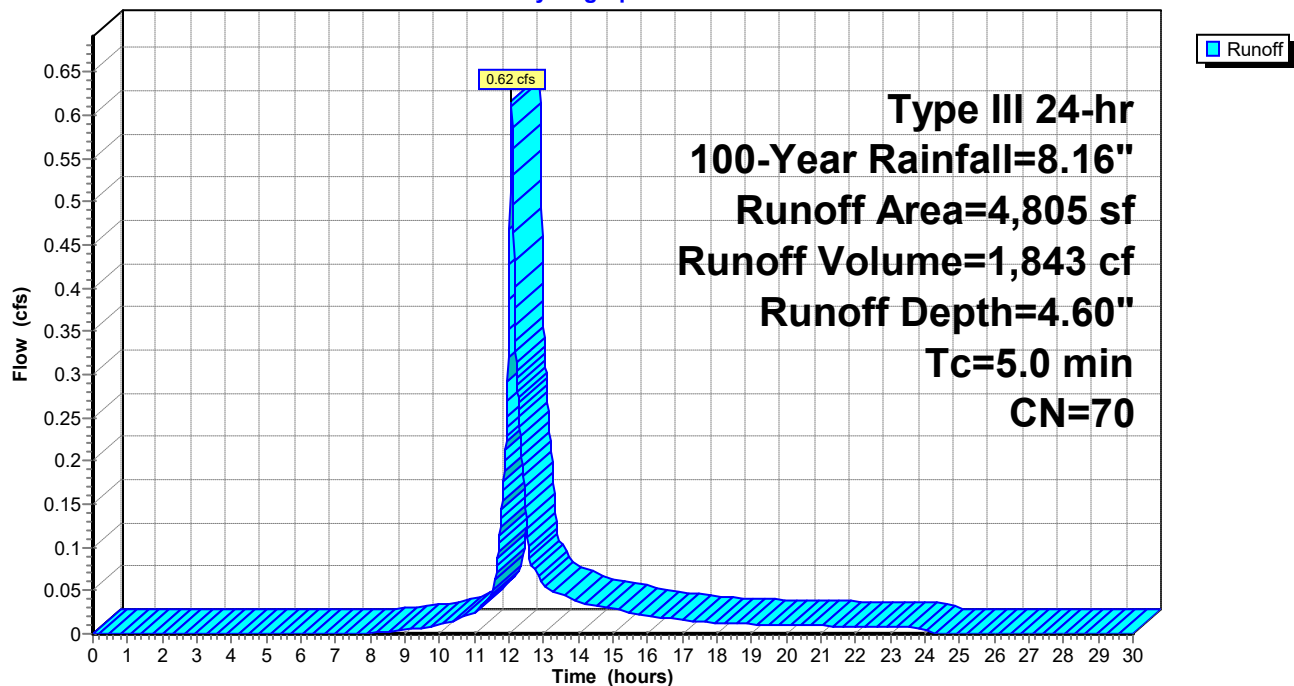
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.16"

	Area (sf)	CN	Description
*	1,251	98	Roof (Existing house & Garage)
*	589	98	Existing paved driveway
*	716	98	Existing Walway, steps & Landings
	2,249	39	>75% Grass cover, Good, HSG A
	4,805	70	Weighted Average
	2,249		46.81% Pervious Area
	2,556		53.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment SC1: SC-1

Hydrograph



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Type III 24-hr 100-Year Rainfall=8.16"

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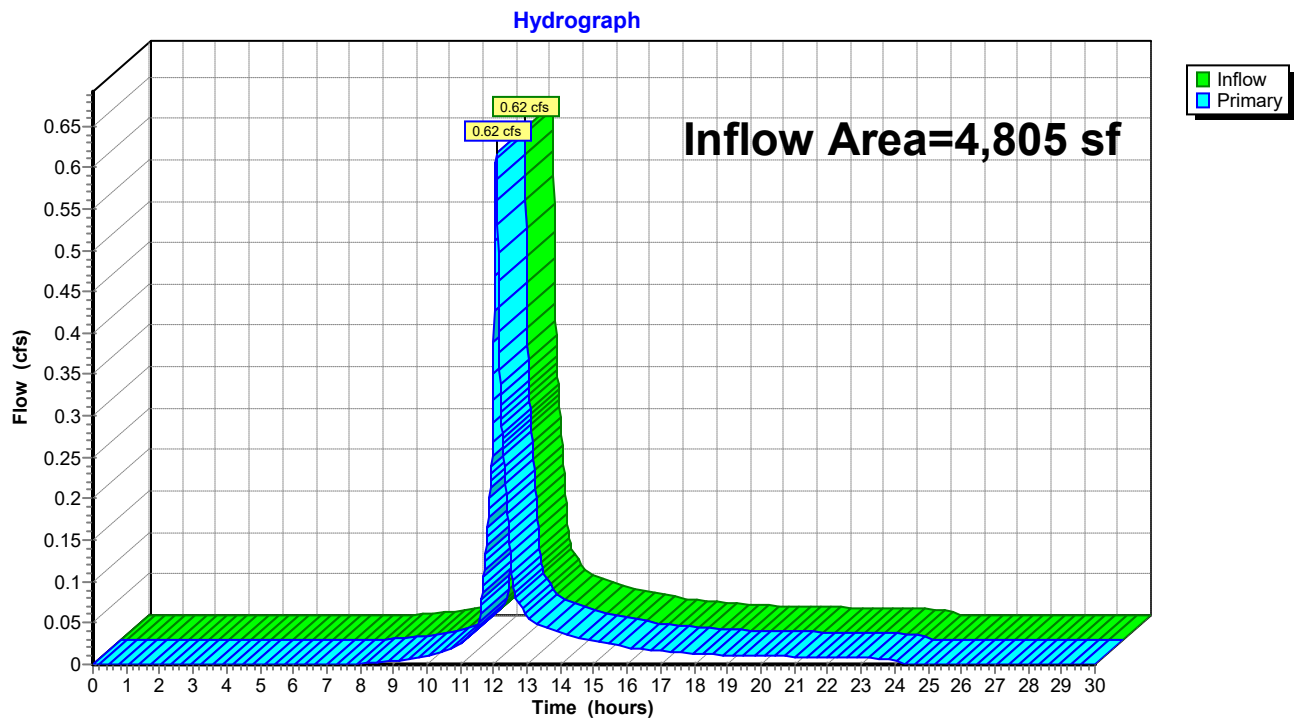
Page 15

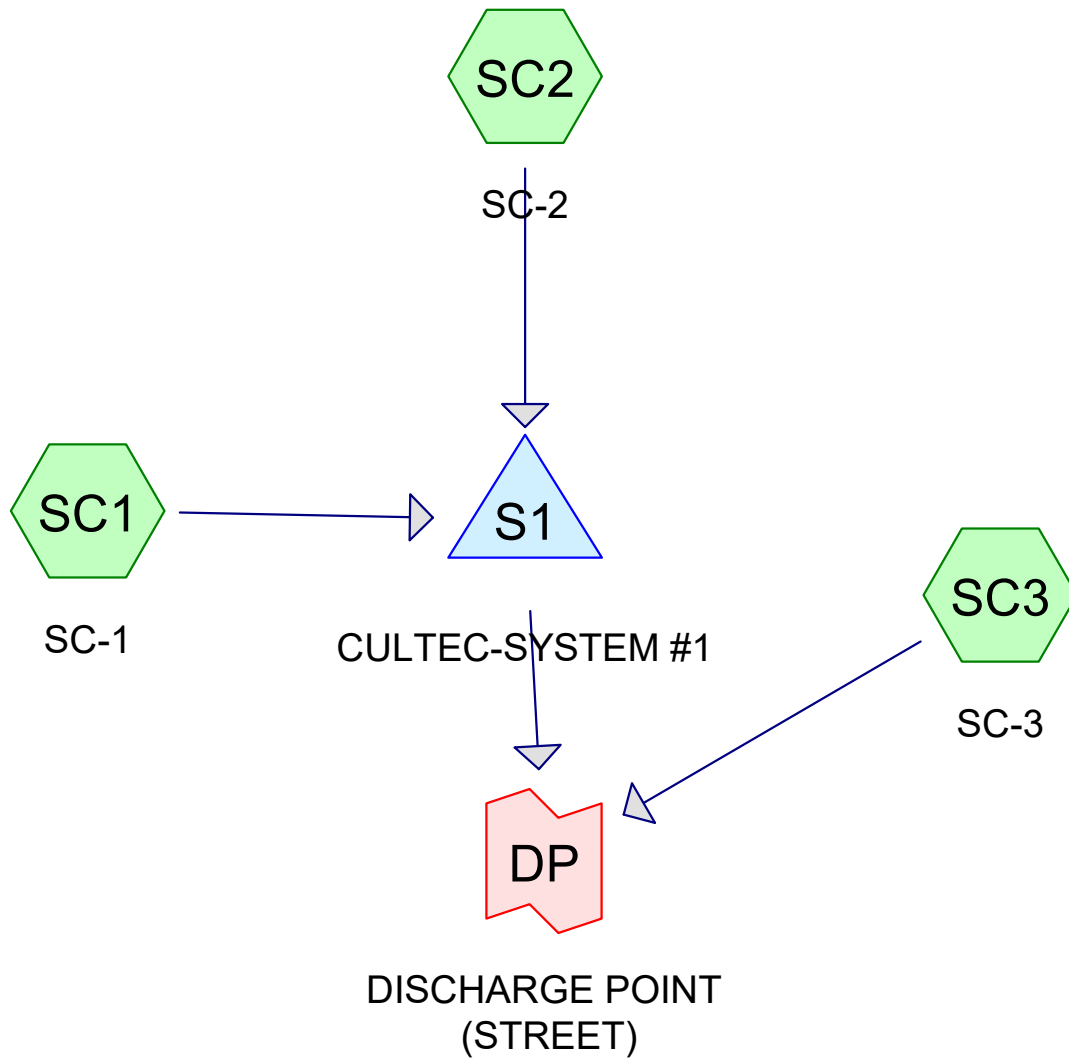
Summary for Link DP: DISCHARGE POINT (STREET)

Inflow Area = 4,805 sf, 53.19% Impervious, Inflow Depth = 4.60" for 100-Year event
Inflow = 0.62 cfs @ 12.07 hrs, Volume= 1,843 cf
Primary = 0.62 cfs @ 12.07 hrs, Volume= 1,843 cf, Atten= 0%, Lag= 0.0 min

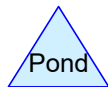
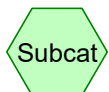
Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

Link DP: DISCHARGE POINT (STREET)





PROPOSED CONDITIONS



Routing Diagram for PROPOSED

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Page 2

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
1,781	39	>75% Grass cover, Good, HSG A (SC3)
878	98	Paved driveway (SC2)
1,620	98	Roof (Proposed house & Covered Patio) (SC1)
525	98	Walkways, Steps & Landings (SC3)
4,804	76	TOTAL AREA

PROPOSED

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Page 3

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
1,781	HSG A	SC3
0	HSG B	
0	HSG C	
0	HSG D	
3,023	Other	SC1, SC2, SC3
4,804		TOTAL AREA

PROPOSED*Type III 24-hr 2-Year Rainfall=3.27"*

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Time span=0.00-30.00 hrs, dt=0.01 hrs, 3001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SC1: SC-1 Runoff Area=1,620 sf 100.00% Impervious Runoff Depth=3.04"
Tc=5.0 min CN=98 Runoff=0.12 cfs 410 cf

Subcatchment SC2: SC-2 Runoff Area=878 sf 100.00% Impervious Runoff Depth=3.04"
Tc=6.0 min CN=98 Runoff=0.06 cfs 222 cf

Subcatchment SC3: SC-3 Runoff Area=2,306 sf 22.77% Impervious Runoff Depth=0.19"
Tc=5.0 min CN=52 Runoff=0.00 cfs 37 cf

Pond S1: CULTEC-SYSTEM #1 Peak Elev=33.45' Storage=128 cf Inflow=0.19 cfs 632 cf
Discarded=0.05 cfs 632 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 632 cf

Link DP: DISCHARGE POINT (STREET) Inflow=0.00 cfs 37 cf
Primary=0.00 cfs 37 cf

Total Runoff Area = 4,804 sf Runoff Volume = 669 cf Average Runoff Depth = 1.67"
37.07% Pervious = 1,781 sf 62.93% Impervious = 3,023 sf

PROPOSED

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Type III 24-hr 2-Year Rainfall=3.27"

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Page 5

Summary for Subcatchment SC1: SC-1

Runoff = 0.12 cfs @ 12.07 hrs, Volume= 410 cf, Depth= 3.04"

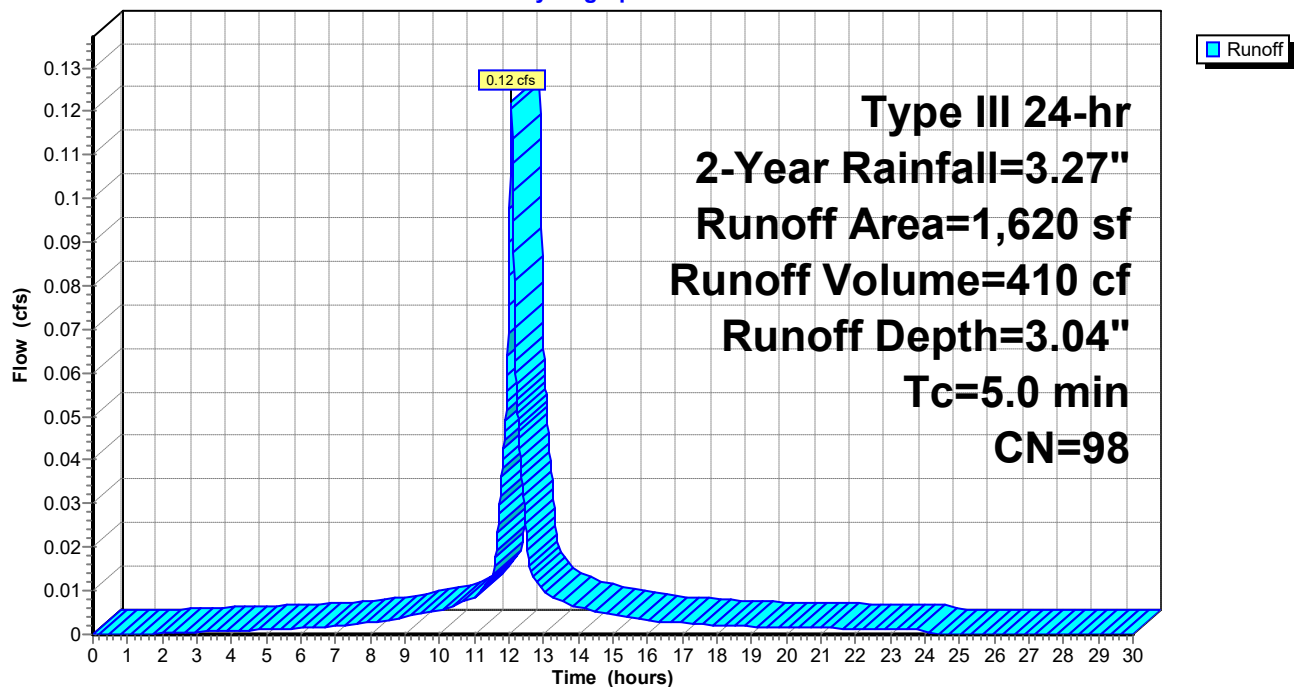
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.27"

Area (sf)	CN	Description
* 1,620	98	Roof (Proposed house & Covered Patio)
1,620		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment SC1: SC-1

Hydrograph



PROPOSED

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Type III 24-hr 2-Year Rainfall=3.27"

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Page 6

Summary for Subcatchment SC2: SC-2

Runoff = 0.06 cfs @ 12.08 hrs, Volume= 222 cf, Depth= 3.04"

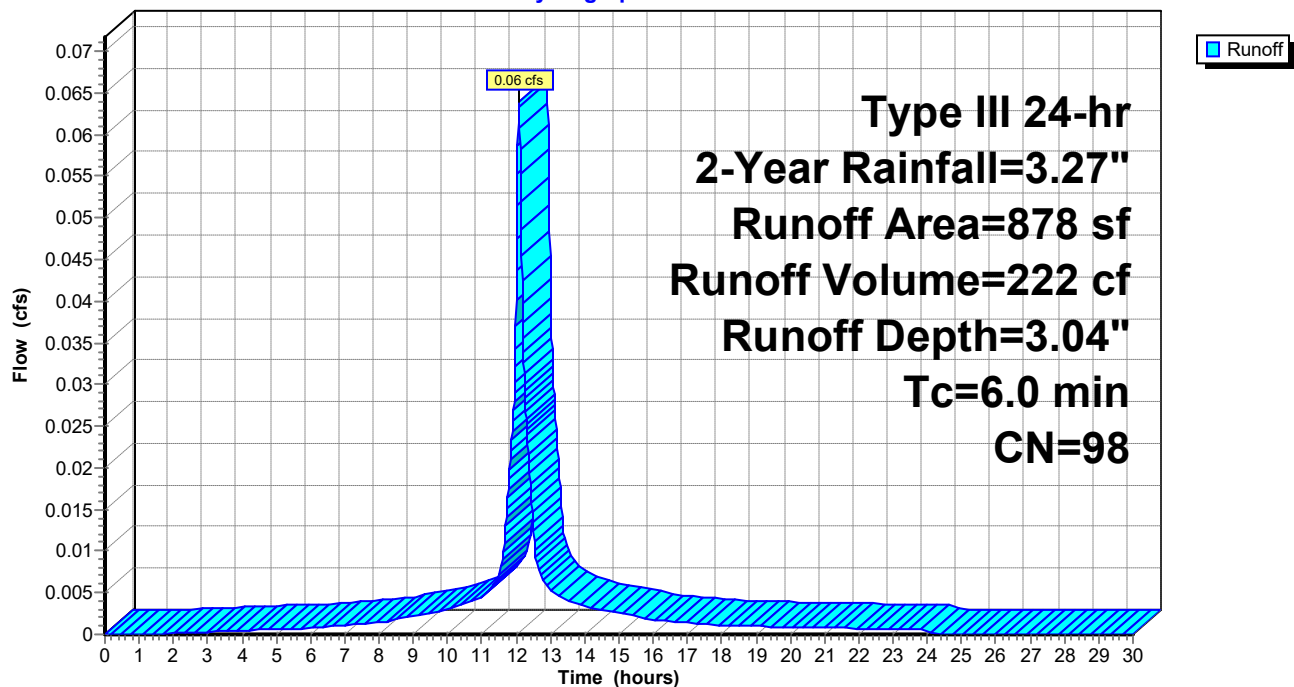
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.27"

	Area (sf)	CN	Description
*	878	98	Paved driveway
	878		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment SC2: SC-2

Hydrograph



PROPOSED

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Type III 24-hr 2-Year Rainfall=3.27"

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Page 7

Summary for Subcatchment SC3: SC-3

Runoff = 0.00 cfs @ 12.38 hrs, Volume= 37 cf, Depth= 0.19"

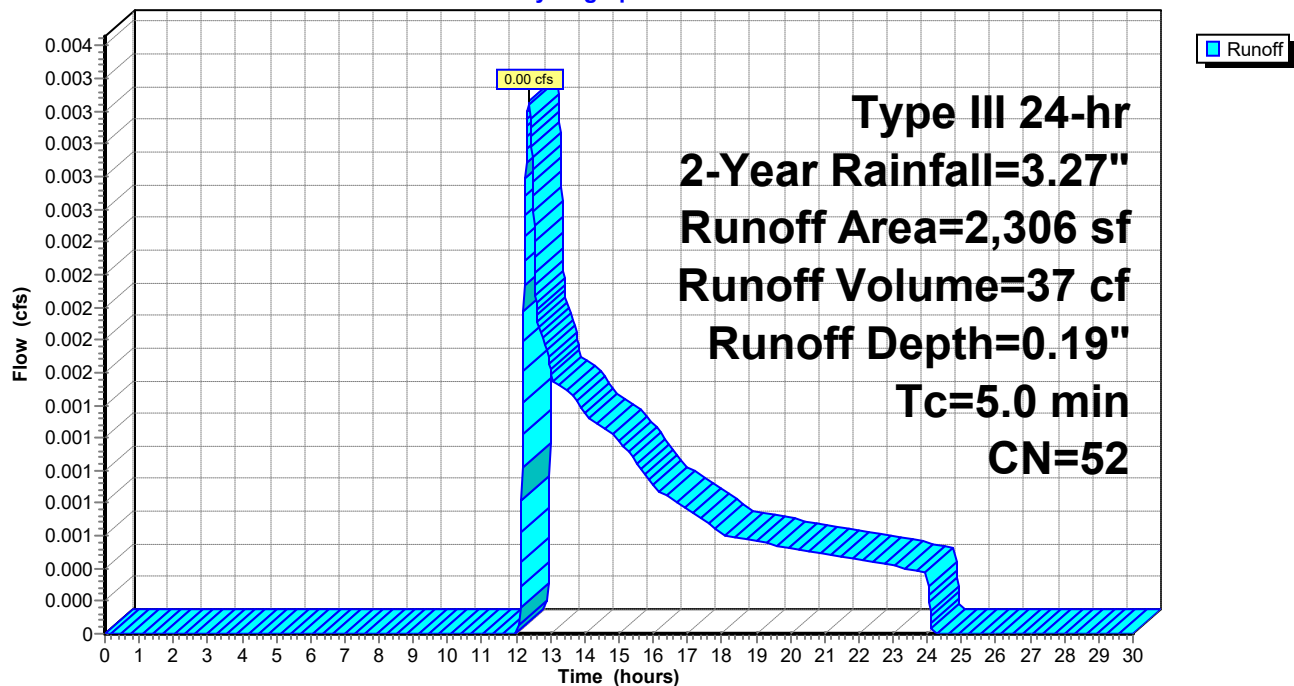
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.27"

	Area (sf)	CN	Description
*	525	98	Walkways, Steps & Landings
	1,781	39	>75% Grass cover, Good, HSG A
	2,306	52	Weighted Average
	1,781		77.23% Pervious Area
	525		22.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment SC3: SC-3

Hydrograph



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Type III 24-hr 2-Year Rainfall=3.27"

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Page 8

Summary for Pond S1: CULTEC-SYSTEM #1

Inflow Area = 2,498 sf, 100.00% Impervious, Inflow Depth = 3.04" for 2-Year event
 Inflow = 0.19 cfs @ 12.07 hrs, Volume= 632 cf
 Outflow = 0.05 cfs @ 12.40 hrs, Volume= 632 cf, Atten= 72%, Lag= 19.8 min
 Discarded = 0.05 cfs @ 12.40 hrs, Volume= 632 cf
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 33.45' @ 12.40 hrs Surf.Area= 163 sf Storage= 128 cf

Plug-Flow detention time= 13.6 min calculated for 632 cf (100% of inflow)

Center-of-Mass det. time= 13.6 min (768.9 - 755.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	32.00'	110 cf	5.00'W x 32.50'L x 2.04'H Field A 332 cf Overall - 57 cf Embedded = 275 cf x 40.0% Voids
#2A	32.50'	57 cf	Cultec C-100HD x 4 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 1 rows
		167 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	32.00'	8.270 in/hr Exfiltration over Wetted area
#2	Primary	33.50'	6.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.05 cfs @ 12.40 hrs HW=33.45' (Free Discharge)↑ **1=Exfiltration** (Exfiltration Controls 0.05 cfs)**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=32.00' (Free Discharge)↑ **2=Orifice/Grate** (Controls 0.00 cfs)

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Type III 24-hr 2-Year Rainfall=3.27"

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Page 9

Pond S1: CULTEC-SYSTEM #1 - Chamber Wizard Field A

Chamber Model = Cultec C-100HD (Cultec Contactor® 100HD)

Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf

Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap

Row Length Adjustment= +0.50' x 1.86 sf x 1 rows

4 Chambers/Row x 7.50' Long +0.50' Row Adjustment = 30.50' Row Length +12.0" End Stone x 2 = 32.50' Base Length

1 Rows x 36.0" Wide + 12.0" Side Stone x 2 = 5.00' Base Width

6.0" Base + 12.5" Chamber Height + 6.0" Cover = 2.04' Field Height

4 Chambers x 14.0 cf +0.50' Row Adjustment x 1.86 sf x 1 Rows = 56.8 cf Chamber Storage

331.8 cf Field - 56.8 cf Chambers = 275.0 cf Stone x 40.0% Voids = 110.0 cf Stone Storage

Chamber Storage + Stone Storage = 166.8 cf = 0.004 af

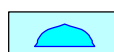
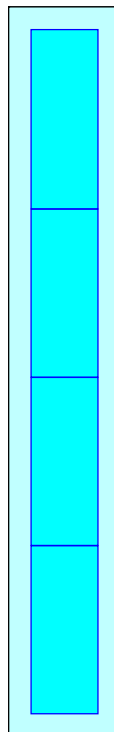
Overall Storage Efficiency = 50.3%

Overall System Size = 32.50' x 5.00' x 2.04'

4 Chambers

12.3 cy Field

10.2 cy Stone



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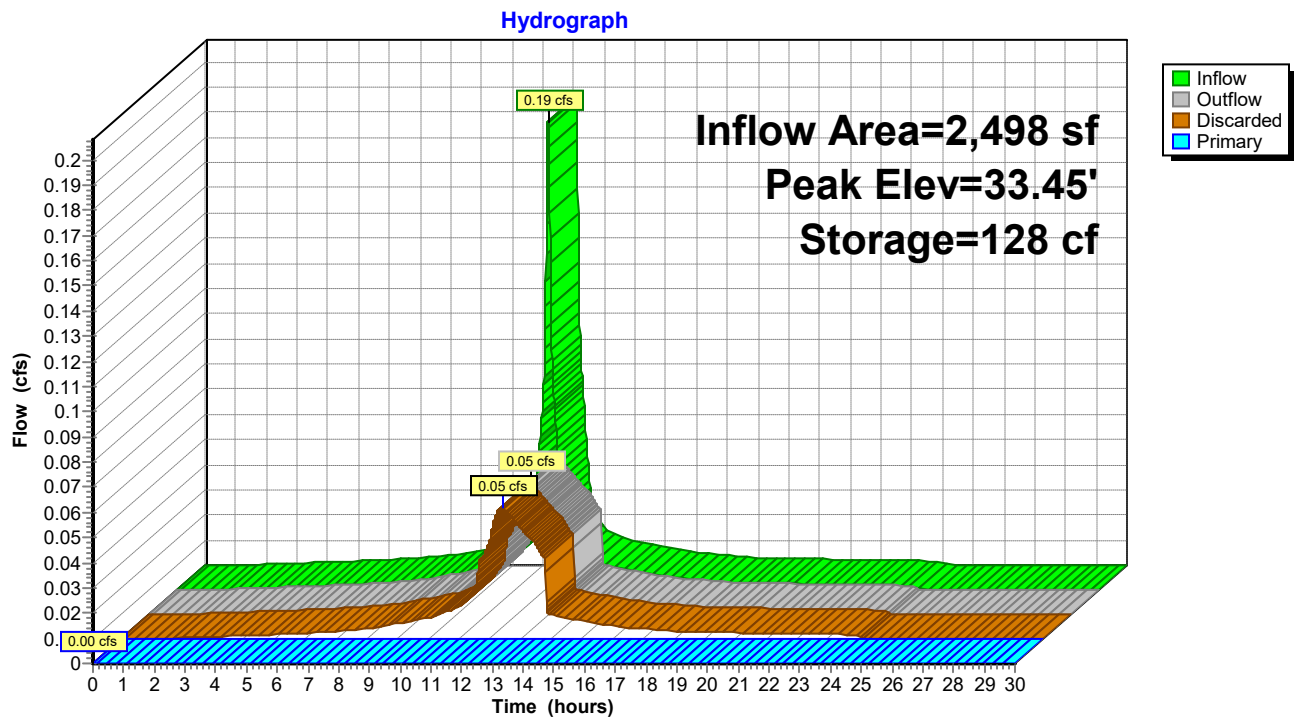
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Type III 24-hr 2-Year Rainfall=3.27"

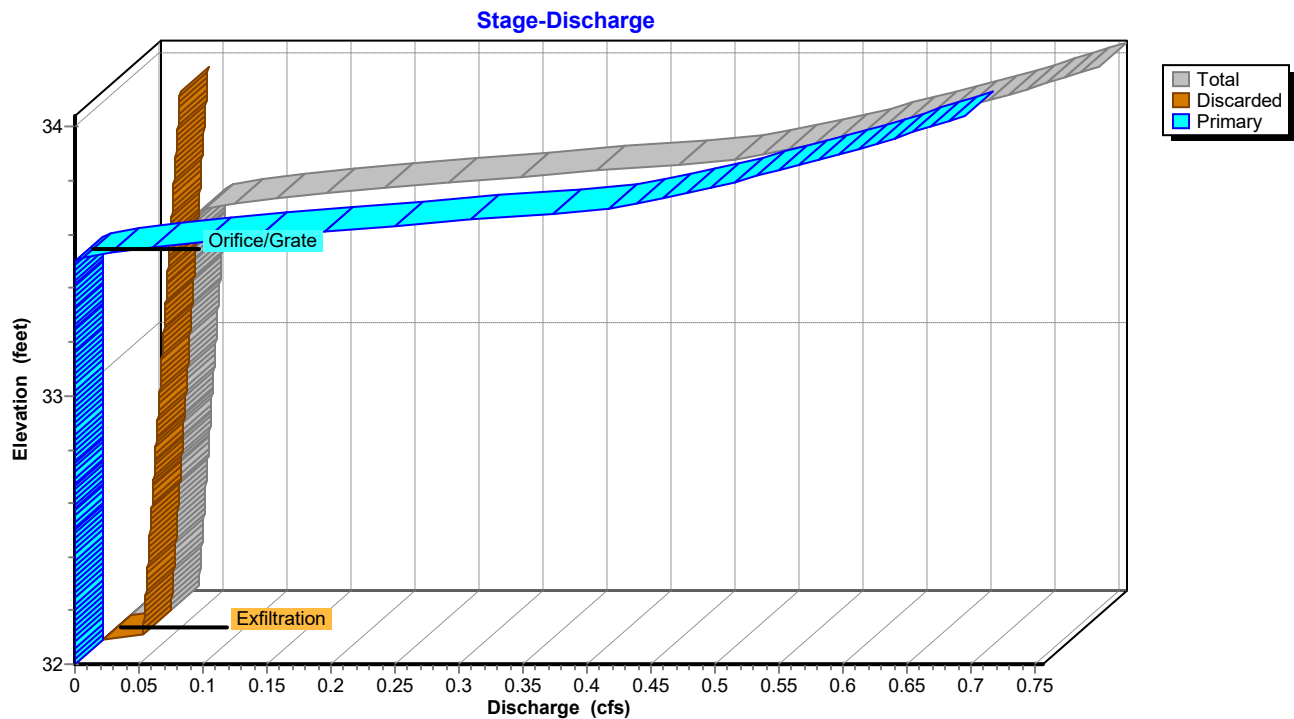
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Page 10

Pond S1: CULTEC-SYSTEM #1



Pond S1: CULTEC-SYSTEM #1

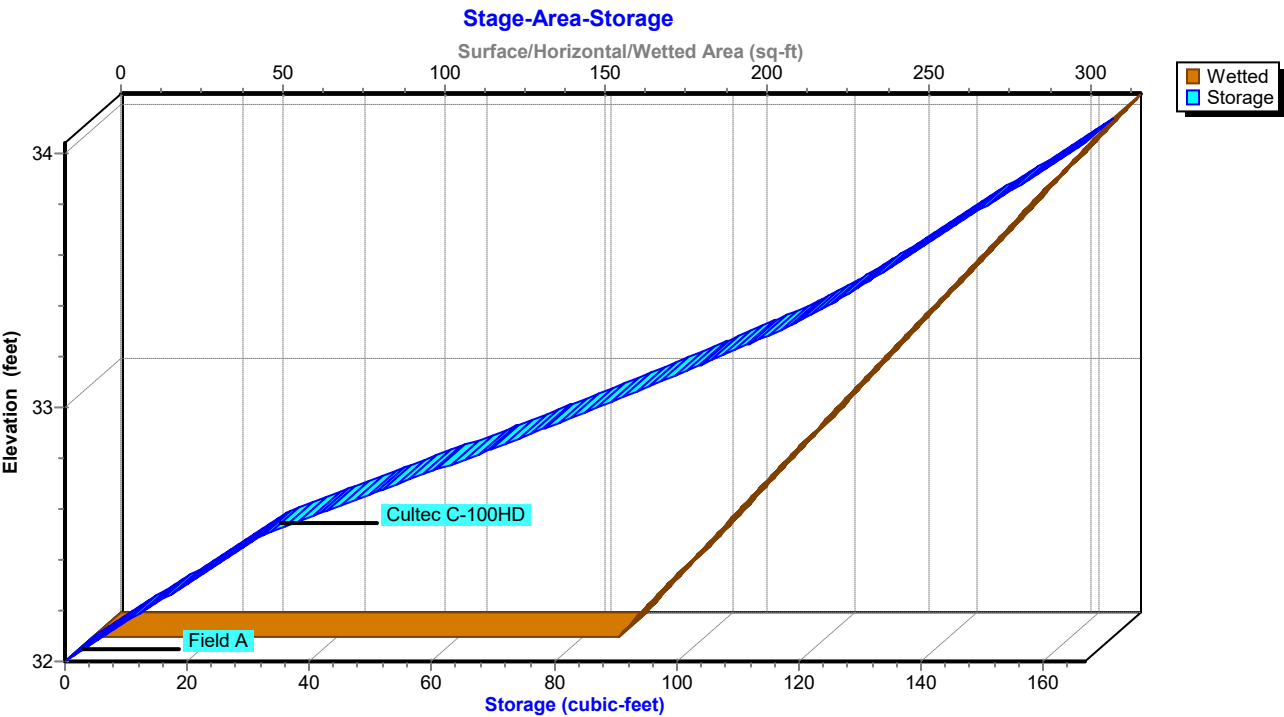


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Page 11

Pond S1: CULTEC-SYSTEM #1



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Type III 24-hr 2-Year Rainfall=3.27"

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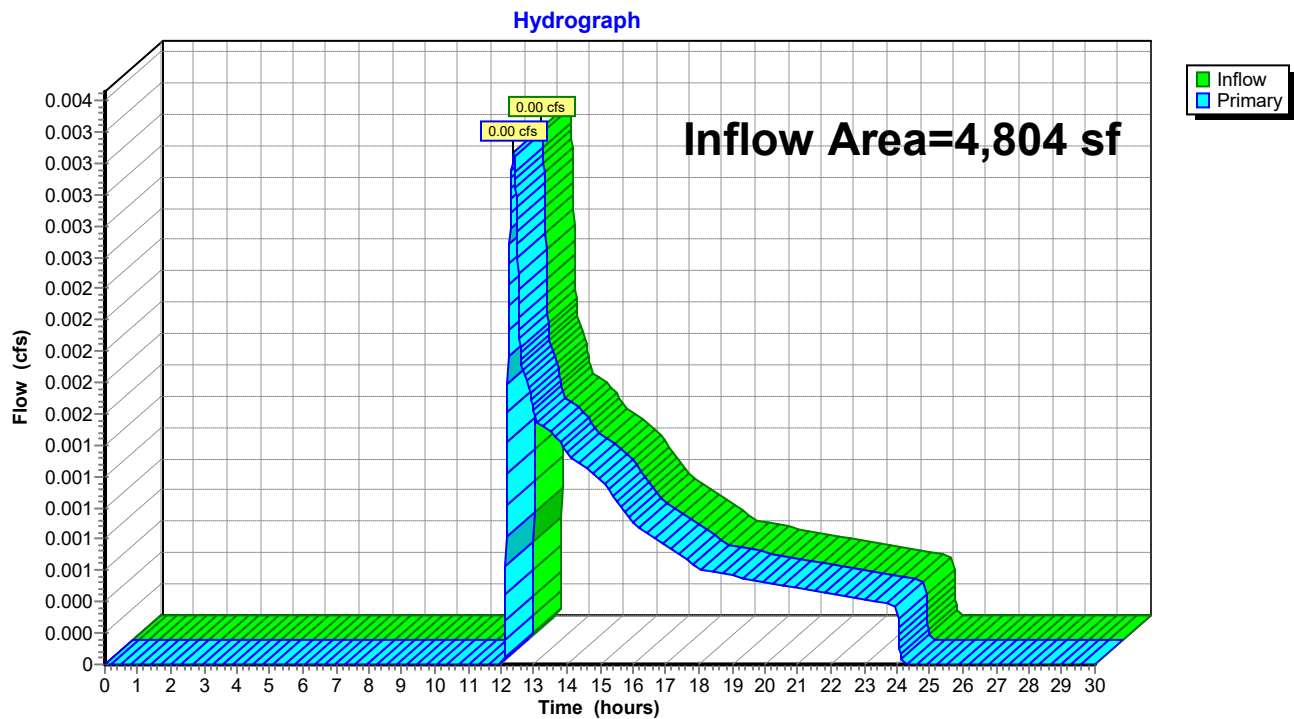
Page 12

Summary for Link DP: DISCHARGE POINT (STREET)

Inflow Area = 4,804 sf, 62.93% Impervious, Inflow Depth = 0.09" for 2-Year event
Inflow = 0.00 cfs @ 12.38 hrs, Volume= 37 cf
Primary = 0.00 cfs @ 12.38 hrs, Volume= 37 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

Link DP: DISCHARGE POINT (STREET)



PROPOSED*Type III 24-hr 10-Year Rainfall=5.16"*

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Page 13

Time span=0.00-30.00 hrs, dt=0.01 hrs, 3001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SC1: SC-1 Runoff Area=1,620 sf 100.00% Impervious Runoff Depth=4.92"
Tc=5.0 min CN=98 Runoff=0.19 cfs 665 cf

Subcatchment SC2: SC-2 Runoff Area=878 sf 100.00% Impervious Runoff Depth=4.92"
Tc=6.0 min CN=98 Runoff=0.10 cfs 360 cf

Subcatchment SC3: SC-3 Runoff Area=2,306 sf 22.77% Impervious Runoff Depth=0.88"
Tc=5.0 min CN=52 Runoff=0.04 cfs 168 cf

Pond S1: CULTEC-SYSTEM #1 Peak Elev=33.63' Storage=140 cf Inflow=0.30 cfs 1,025 cf
Discarded=0.05 cfs 889 cf Primary=0.23 cfs 136 cf Outflow=0.29 cfs 1,025 cf

Link DP: DISCHARGE POINT (STREET) Inflow=0.27 cfs 305 cf
Primary=0.27 cfs 305 cf

Total Runoff Area = 4,804 sf Runoff Volume = 1,193 cf Average Runoff Depth = 2.98"
37.07% Pervious = 1,781 sf 62.93% Impervious = 3,023 sf

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Type III 24-hr 10-Year Rainfall=5.16"

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Page 14

Summary for Subcatchment SC1: SC-1

Runoff = 0.19 cfs @ 12.07 hrs, Volume= 665 cf, Depth= 4.92"

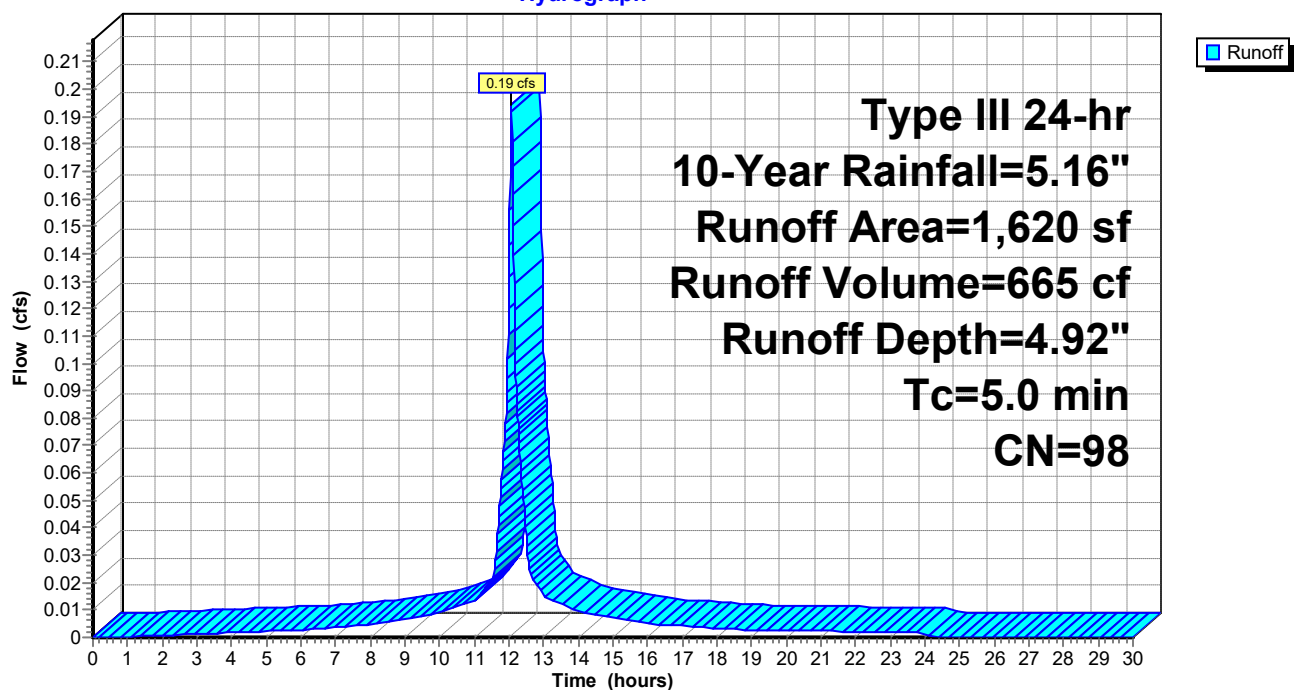
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=5.16"

	Area (sf)	CN	Description
*	1,620	98	Roof (Proposed house & Covered Patio)
	1,620		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment SC1: SC-1

Hydrograph



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Type III 24-hr 10-Year Rainfall=5.16"

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Page 15

Summary for Subcatchment SC2: SC-2

Runoff = 0.10 cfs @ 12.08 hrs, Volume= 360 cf, Depth= 4.92"

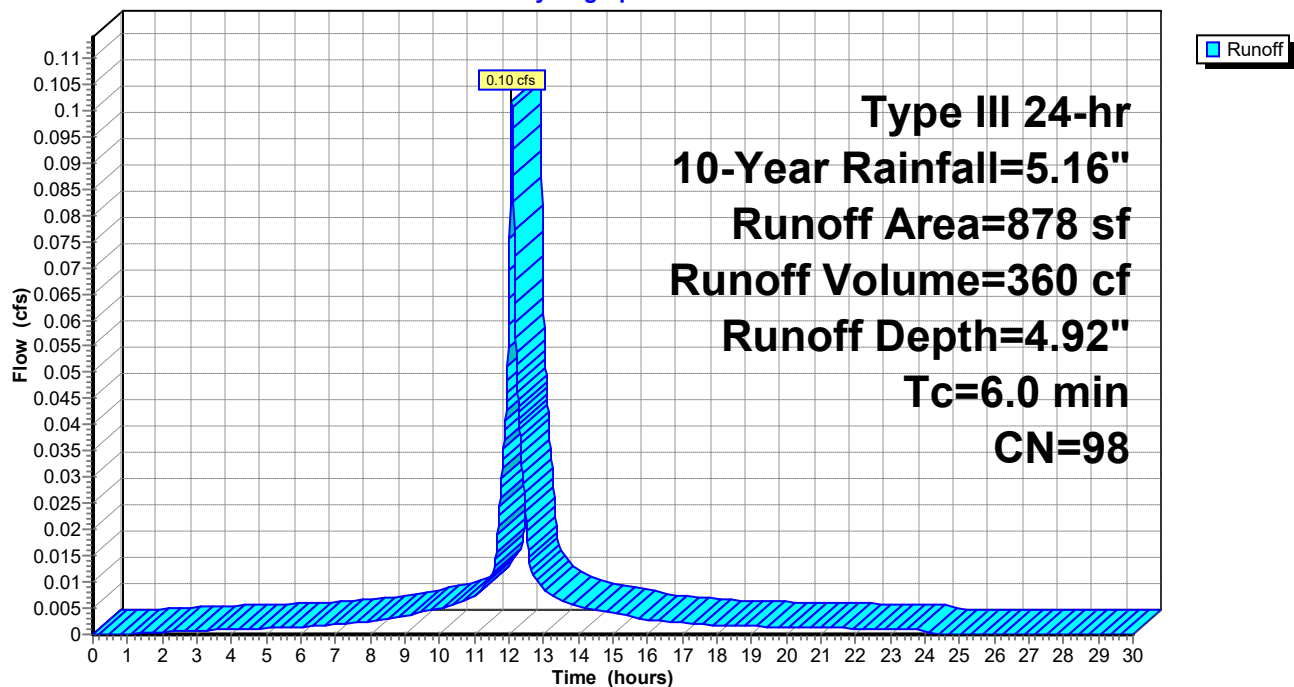
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=5.16"

	Area (sf)	CN	Description
*	878	98	Paved driveway
	878		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment SC2: SC-2

Hydrograph



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Type III 24-hr 10-Year Rainfall=5.16"

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Page 16

Summary for Subcatchment SC3: SC-3

Runoff = 0.04 cfs @ 12.10 hrs, Volume= 168 cf, Depth= 0.88"

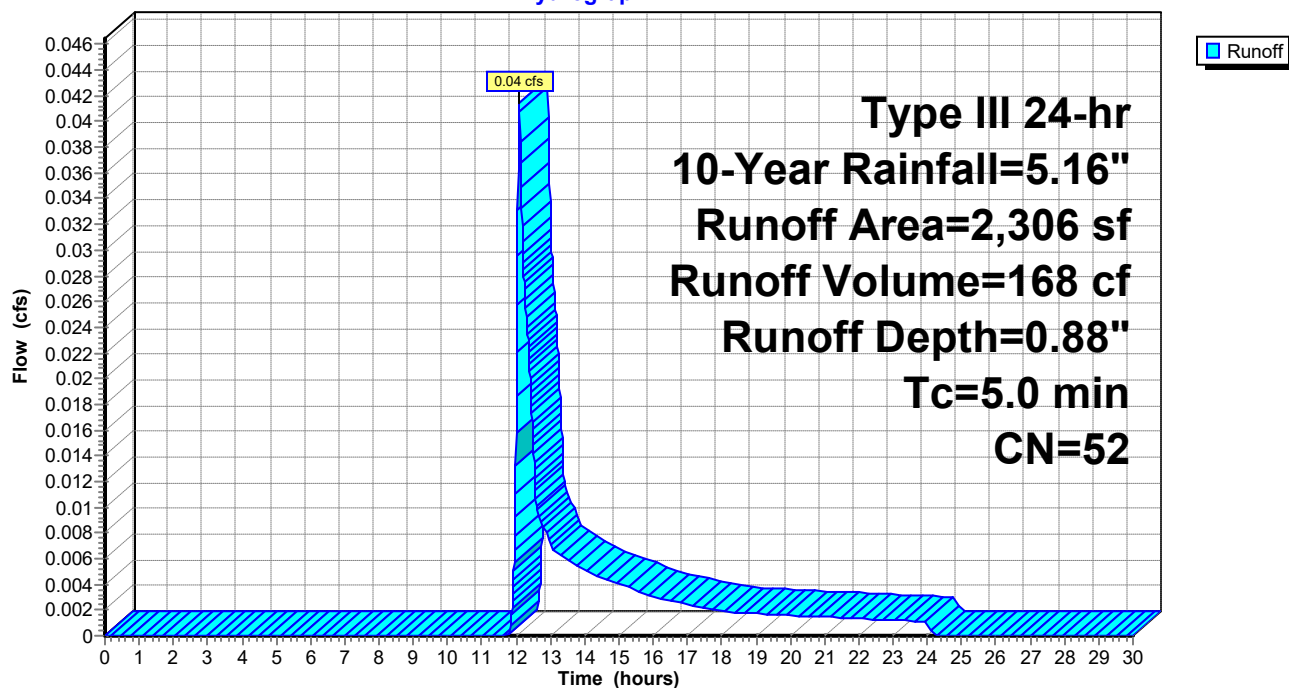
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=5.16"

	Area (sf)	CN	Description
*	525	98	Walkways, Steps & Landings
	1,781	39	>75% Grass cover, Good, HSG A
	2,306	52	Weighted Average
	1,781		77.23% Pervious Area
	525		22.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment SC3: SC-3

Hydrograph



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Type III 24-hr 10-Year Rainfall=5.16"

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Page 17

Summary for Pond S1: CULTEC-SYSTEM #1

Inflow Area = 2,498 sf, 100.00% Impervious, Inflow Depth = 4.92" for 10-Year event
 Inflow = 0.30 cfs @ 12.07 hrs, Volume= 1,025 cf
 Outflow = 0.29 cfs @ 12.09 hrs, Volume= 1,025 cf, Atten= 3%, Lag= 1.2 min
 Discarded = 0.05 cfs @ 12.09 hrs, Volume= 889 cf
 Primary = 0.23 cfs @ 12.09 hrs, Volume= 136 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 33.63' @ 12.09 hrs Surf.Area= 163 sf Storage= 140 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 12.0 min (758.9 - 746.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	32.00'	110 cf	5.00'W x 32.50'L x 2.04'H Field A 332 cf Overall - 57 cf Embedded = 275 cf x 40.0% Voids
#2A	32.50'	57 cf	Cultec C-100HD x 4 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 1 rows
		167 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	32.00'	8.270 in/hr Exfiltration over Wetted area
#2	Primary	33.50'	6.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.05 cfs @ 12.09 hrs HW=33.63' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.05 cfs)**Primary OutFlow** Max=0.23 cfs @ 12.09 hrs HW=33.63' (Free Discharge)↑**2=Orifice/Grate** (Weir Controls 0.23 cfs @ 1.16 fps)

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Type III 24-hr 10-Year Rainfall=5.16"

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Page 18

Pond S1: CULTEC-SYSTEM #1 - Chamber Wizard Field A

Chamber Model = Cultec C-100HD (Cultec Contactor® 100HD)

Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf

Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap

Row Length Adjustment= +0.50' x 1.86 sf x 1 rows

4 Chambers/Row x 7.50' Long +0.50' Row Adjustment = 30.50' Row Length +12.0" End Stone x 2 = 32.50' Base Length

1 Rows x 36.0" Wide + 12.0" Side Stone x 2 = 5.00' Base Width

6.0" Base + 12.5" Chamber Height + 6.0" Cover = 2.04' Field Height

4 Chambers x 14.0 cf +0.50' Row Adjustment x 1.86 sf x 1 Rows = 56.8 cf Chamber Storage

331.8 cf Field - 56.8 cf Chambers = 275.0 cf Stone x 40.0% Voids = 110.0 cf Stone Storage

Chamber Storage + Stone Storage = 166.8 cf = 0.004 af

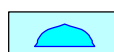
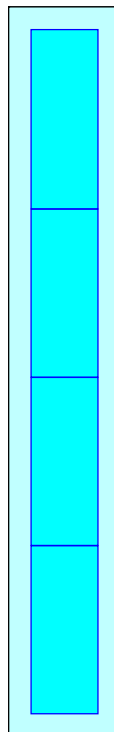
Overall Storage Efficiency = 50.3%

Overall System Size = 32.50' x 5.00' x 2.04'

4 Chambers

12.3 cy Field

10.2 cy Stone



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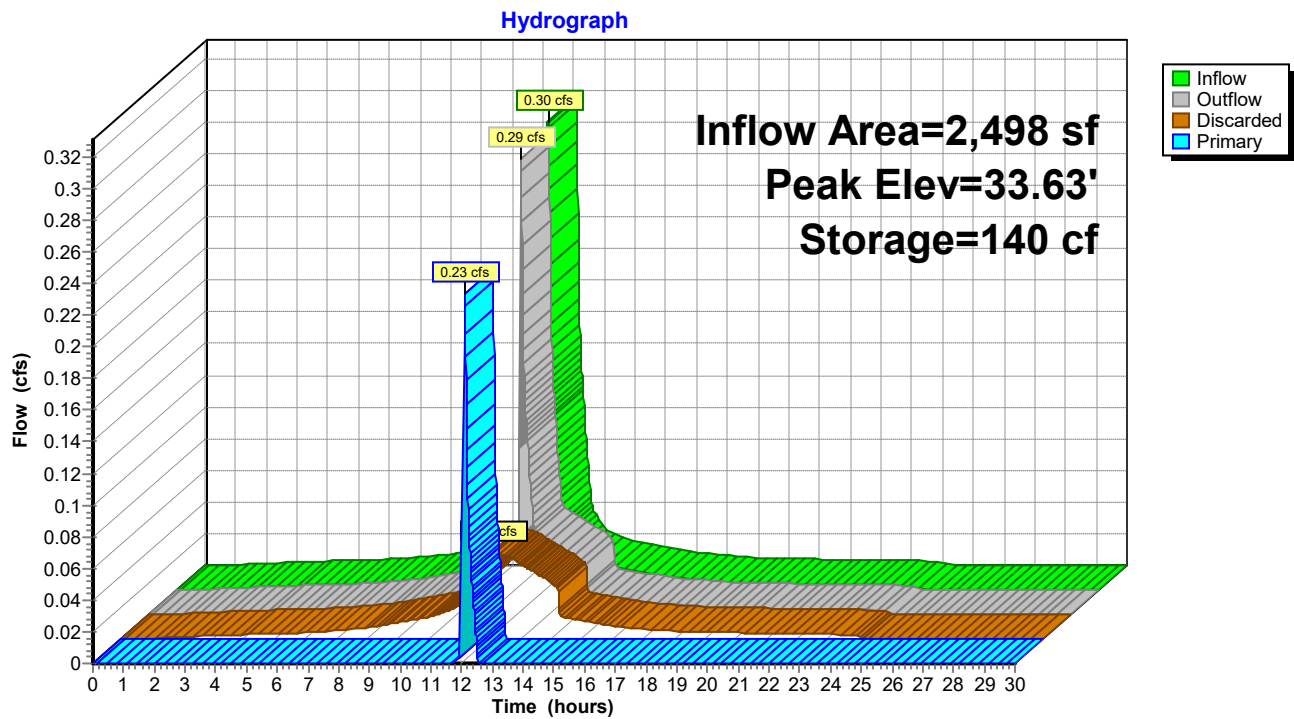
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Type III 24-hr 10-Year Rainfall=5.16"

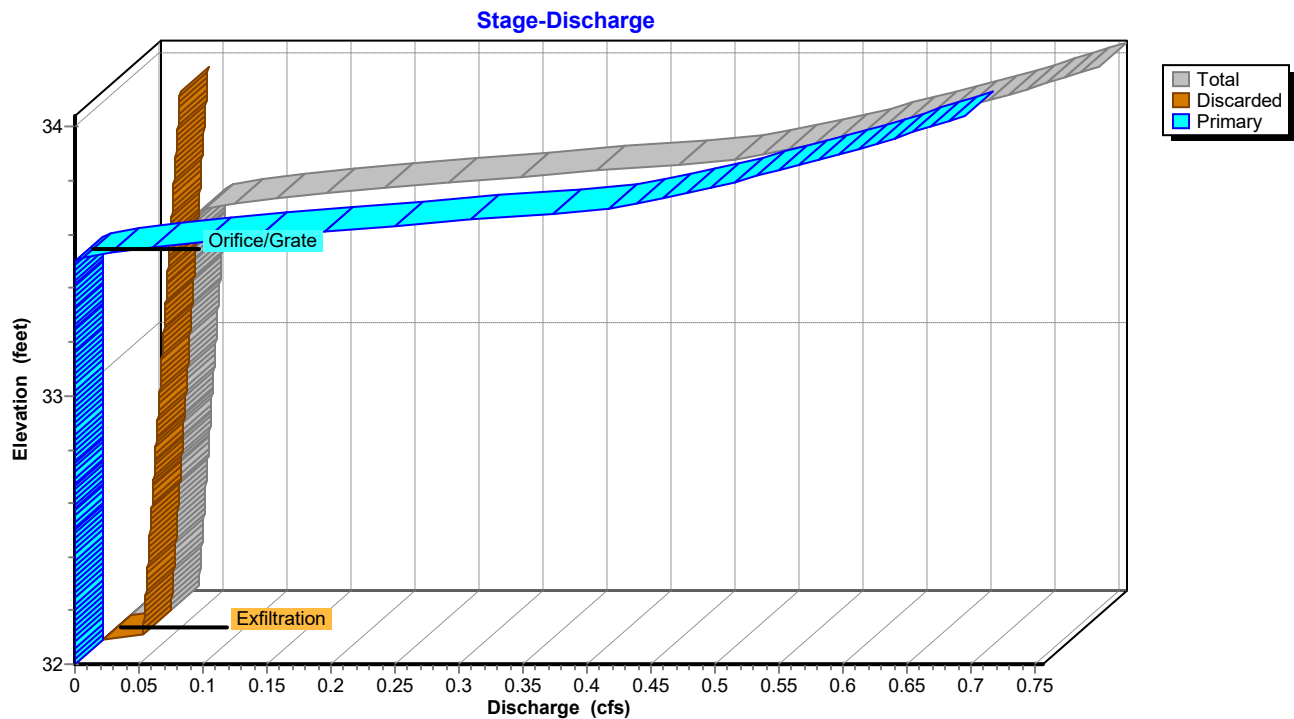
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Page 19

Pond S1: CULTEC-SYSTEM #1



Pond S1: CULTEC-SYSTEM #1

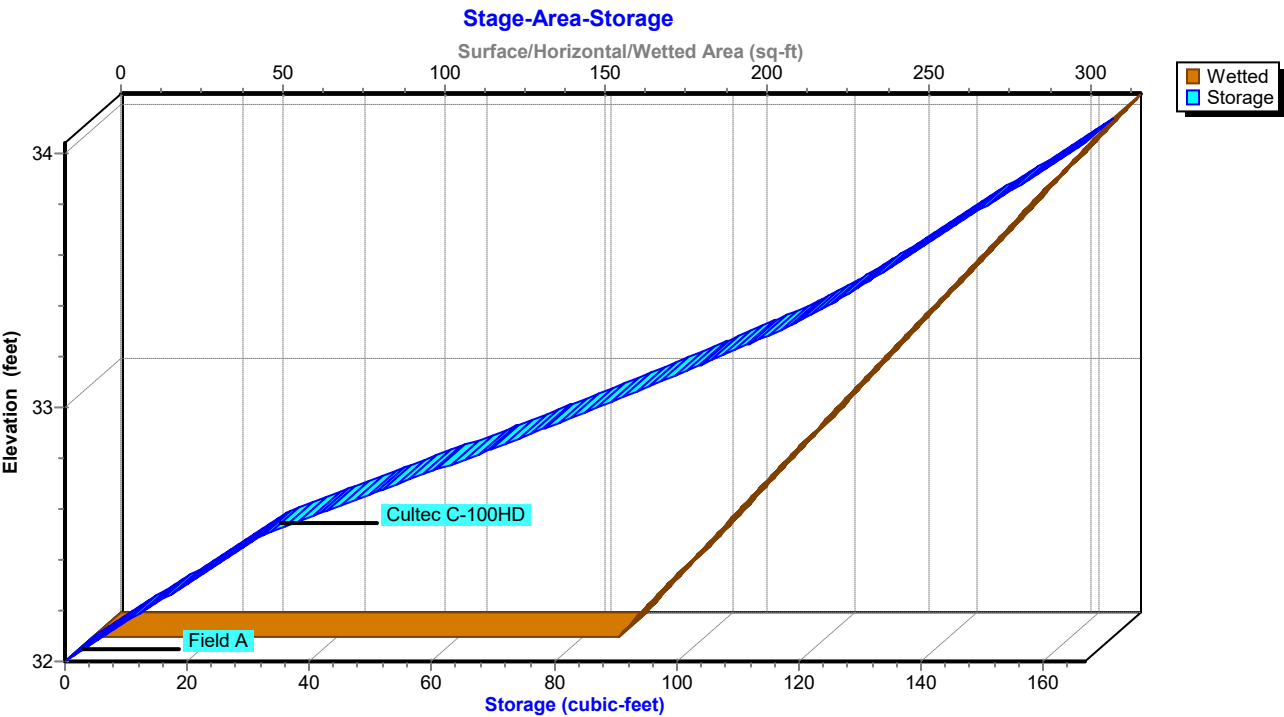


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Page 20

Pond S1: CULTEC-SYSTEM #1



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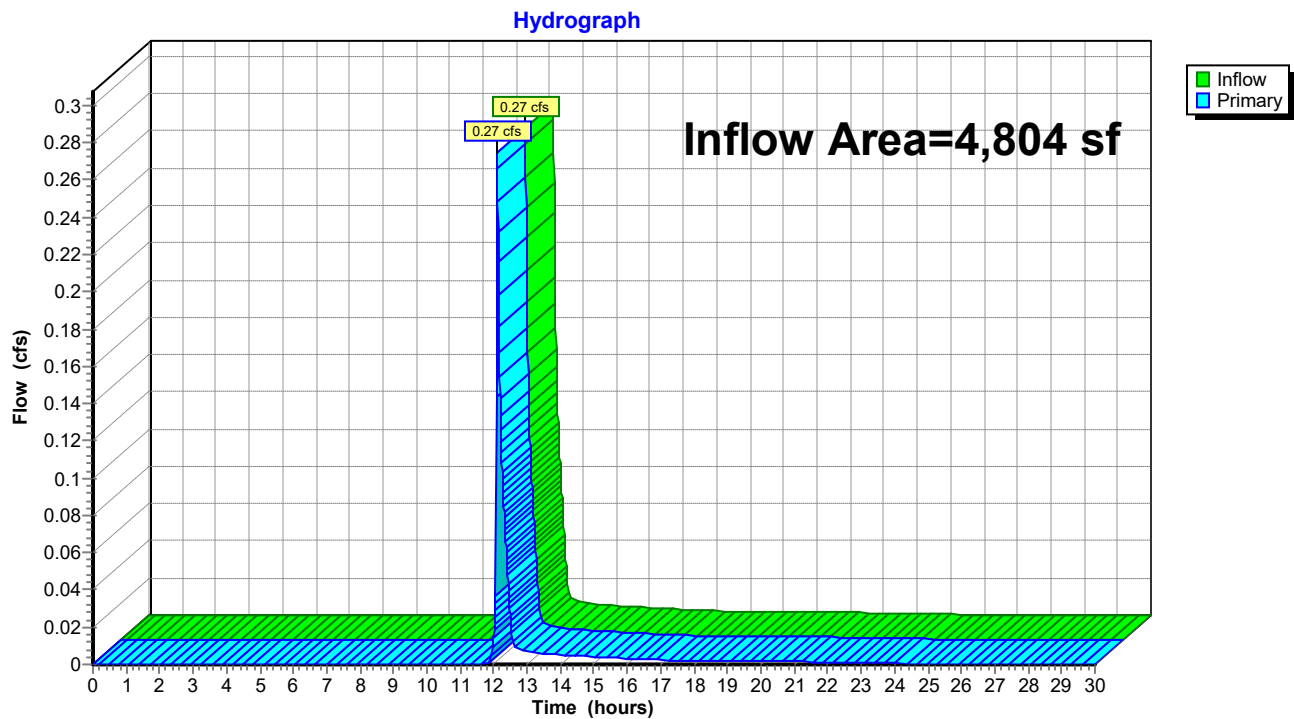
Page 21

Summary for Link DP: DISCHARGE POINT (STREET)

Inflow Area = 4,804 sf, 62.93% Impervious, Inflow Depth = 0.76" for 10-Year event
Inflow = 0.27 cfs @ 12.09 hrs, Volume= 305 cf
Primary = 0.27 cfs @ 12.09 hrs, Volume= 305 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

Link DP: DISCHARGE POINT (STREET)



PROPOSED*Type III 24-hr 25-Year Rainfall=6.35"*

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Page 22

Time span=0.00-30.00 hrs, dt=0.01 hrs, 3001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SC1: SC-1 Runoff Area=1,620 sf 100.00% Impervious Runoff Depth=6.11"
Tc=5.0 min CN=98 Runoff=0.24 cfs 825 cf

Subcatchment SC2: SC-2 Runoff Area=878 sf 100.00% Impervious Runoff Depth=6.11"
Tc=6.0 min CN=98 Runoff=0.13 cfs 447 cf

Subcatchment SC3: SC-3 Runoff Area=2,306 sf 22.77% Impervious Runoff Depth=1.48"
Tc=5.0 min CN=52 Runoff=0.08 cfs 284 cf

Pond S1: CULTEC-SYSTEM #1 Peak Elev=33.65' Storage=142 cf Inflow=0.36 cfs 1,272 cf
Discarded=0.05 cfs 1,037 cf Primary=0.31 cfs 235 cf Outflow=0.36 cfs 1,272 cf

Link DP: DISCHARGE POINT (STREET) Inflow=0.39 cfs 519 cf
Primary=0.39 cfs 519 cf

Total Runoff Area = 4,804 sf Runoff Volume = 1,556 cf Average Runoff Depth = 3.89"
37.07% Pervious = 1,781 sf 62.93% Impervious = 3,023 sf

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Type III 24-hr 25-Year Rainfall=6.35"

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Page 23

Summary for Subcatchment SC1: SC-1

Runoff = 0.24 cfs @ 12.07 hrs, Volume= 825 cf, Depth= 6.11"

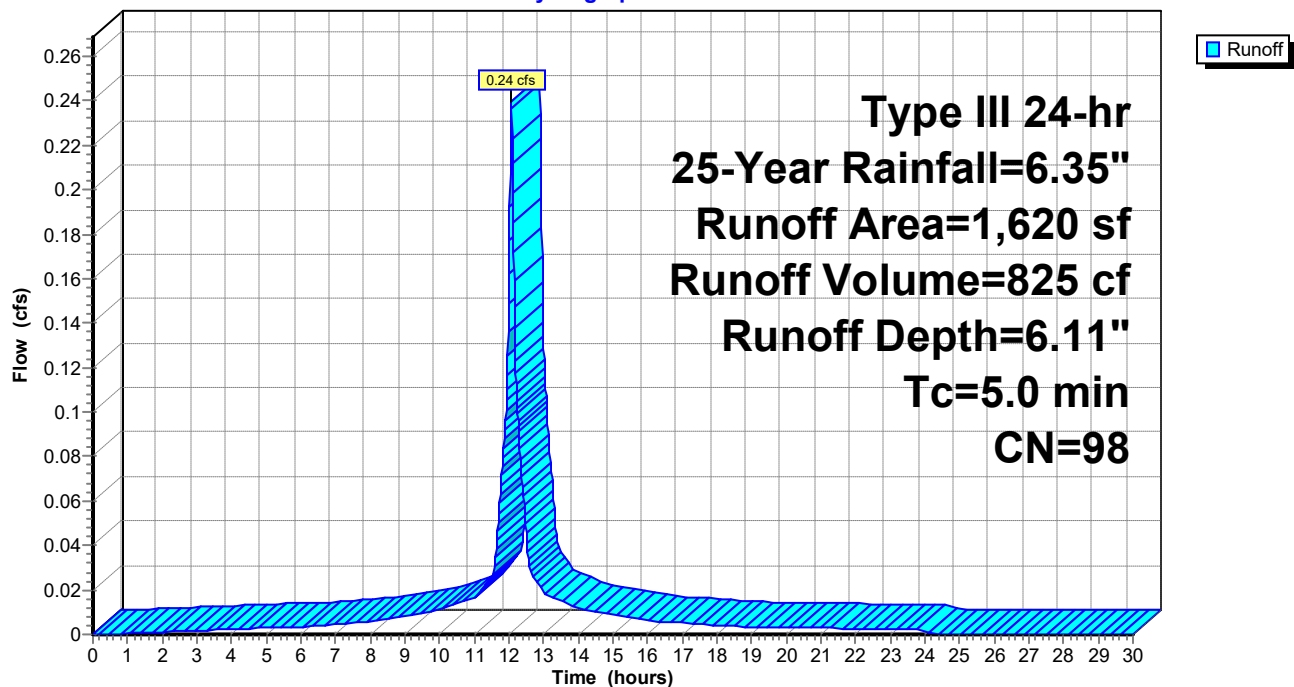
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.35"

	Area (sf)	CN	Description
*	1,620	98	Roof (Proposed house & Covered Patio)
	1,620		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment SC1: SC-1

Hydrograph



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Type III 24-hr 25-Year Rainfall=6.35"

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Page 24

Summary for Subcatchment SC2: SC-2

Runoff = 0.13 cfs @ 12.08 hrs, Volume= 447 cf, Depth= 6.11"

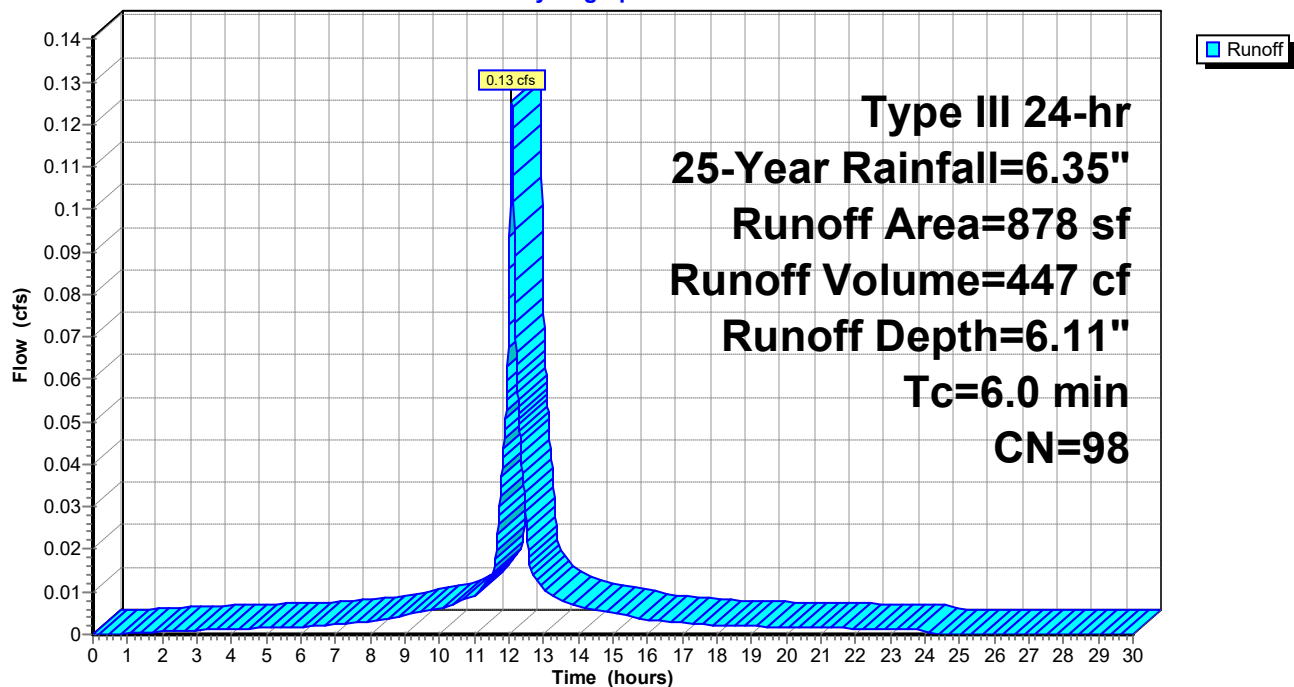
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.35"

	Area (sf)	CN	Description
*	878	98	Paved driveway
	878		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment SC2: SC-2

Hydrograph



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Type III 24-hr 25-Year Rainfall=6.35"

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Page 25

Summary for Subcatchment SC3: SC-3

Runoff = 0.08 cfs @ 12.09 hrs, Volume= 284 cf, Depth= 1.48"

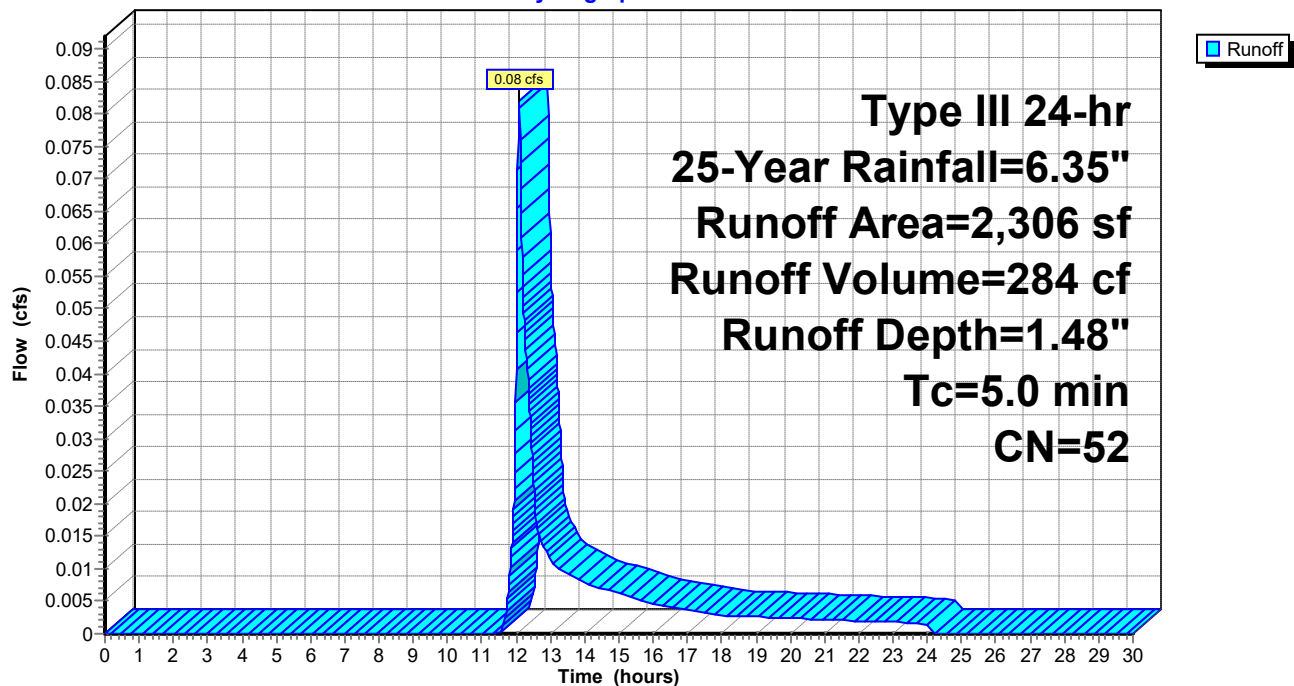
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.35"

	Area (sf)	CN	Description
*	525	98	Walkways, Steps & Landings
	1,781	39	>75% Grass cover, Good, HSG A
	2,306	52	Weighted Average
	1,781		77.23% Pervious Area
	525		22.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment SC3: SC-3

Hydrograph



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Type III 24-hr 25-Year Rainfall=6.35"

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Page 26

Summary for Pond S1: CULTEC-SYSTEM #1

Inflow Area = 2,498 sf, 100.00% Impervious, Inflow Depth = 6.11" for 25-Year event
 Inflow = 0.36 cfs @ 12.07 hrs, Volume= 1,272 cf
 Outflow = 0.36 cfs @ 12.08 hrs, Volume= 1,272 cf, Atten= 0%, Lag= 0.4 min
 Discarded = 0.05 cfs @ 12.08 hrs, Volume= 1,037 cf
 Primary = 0.31 cfs @ 12.08 hrs, Volume= 235 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 33.65' @ 12.08 hrs Surf.Area= 163 sf Storage= 142 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 11.4 min (755.1 - 743.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	32.00'	110 cf	5.00'W x 32.50'L x 2.04'H Field A 332 cf Overall - 57 cf Embedded = 275 cf x 40.0% Voids
#2A	32.50'	57 cf	Cultec C-100HD x 4 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 1 rows
		167 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	32.00'	8.270 in/hr Exfiltration over Wetted area
#2	Primary	33.50'	6.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.05 cfs @ 12.08 hrs HW=33.65' (Free Discharge)↑ **1=Exfiltration** (Exfiltration Controls 0.05 cfs)**Primary OutFlow** Max=0.31 cfs @ 12.08 hrs HW=33.65' (Free Discharge)↑ **2=Orifice/Grate** (Weir Controls 0.31 cfs @ 1.28 fps)

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Type III 24-hr 25-Year Rainfall=6.35"

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Page 27

Pond S1: CULTEC-SYSTEM #1 - Chamber Wizard Field A

Chamber Model = Cultec C-100HD (Cultec Contactor® 100HD)

Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf

Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap

Row Length Adjustment= +0.50' x 1.86 sf x 1 rows

4 Chambers/Row x 7.50' Long +0.50' Row Adjustment = 30.50' Row Length +12.0" End Stone x 2 = 32.50' Base Length

1 Rows x 36.0" Wide + 12.0" Side Stone x 2 = 5.00' Base Width

6.0" Base + 12.5" Chamber Height + 6.0" Cover = 2.04' Field Height

4 Chambers x 14.0 cf +0.50' Row Adjustment x 1.86 sf x 1 Rows = 56.8 cf Chamber Storage

331.8 cf Field - 56.8 cf Chambers = 275.0 cf Stone x 40.0% Voids = 110.0 cf Stone Storage

Chamber Storage + Stone Storage = 166.8 cf = 0.004 af

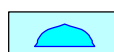
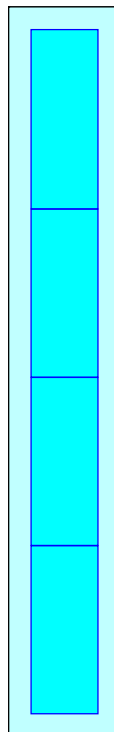
Overall Storage Efficiency = 50.3%

Overall System Size = 32.50' x 5.00' x 2.04'

4 Chambers

12.3 cy Field

10.2 cy Stone



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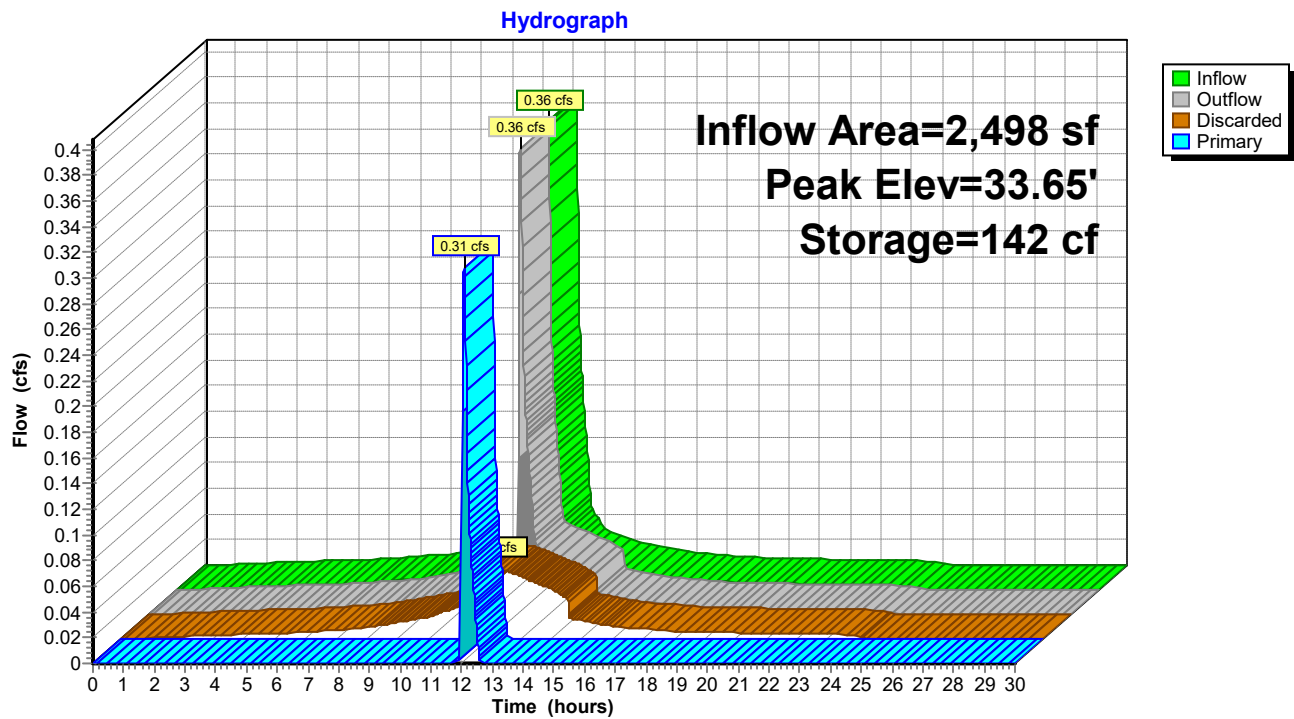
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Type III 24-hr 25-Year Rainfall=6.35"

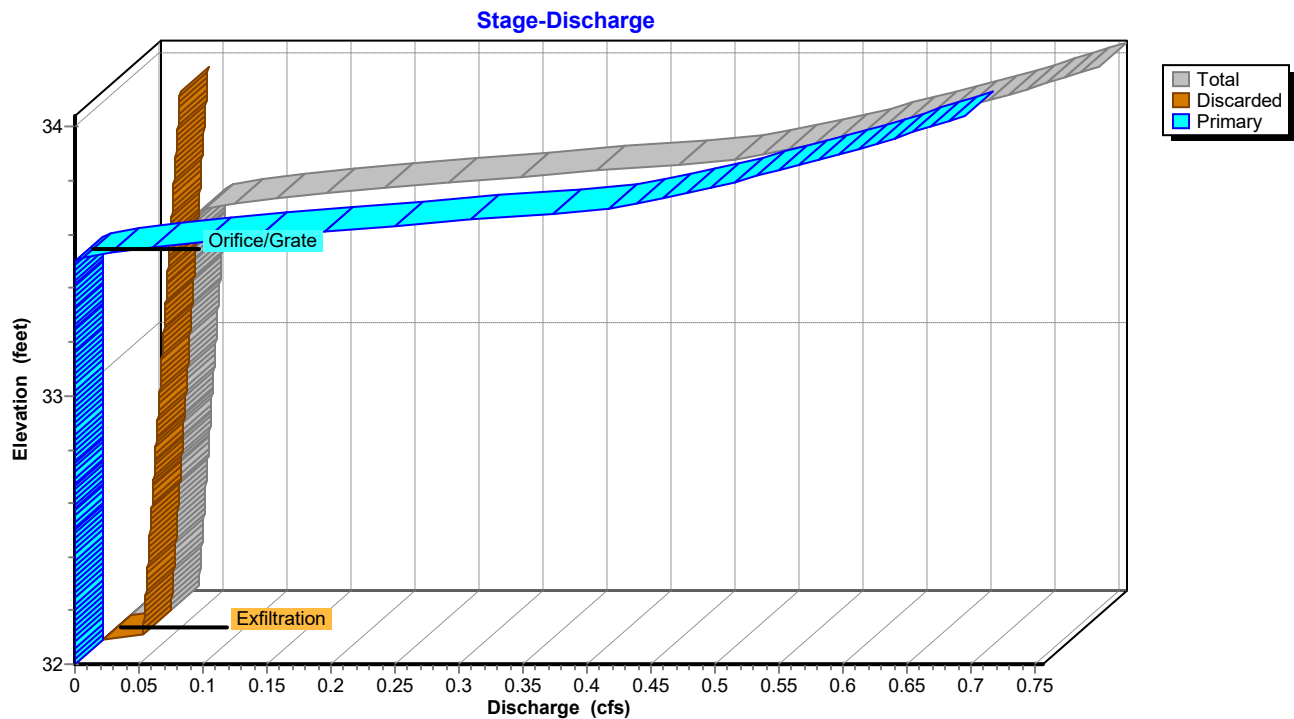
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Page 28

Pond S1: CULTEC-SYSTEM #1



Pond S1: CULTEC-SYSTEM #1

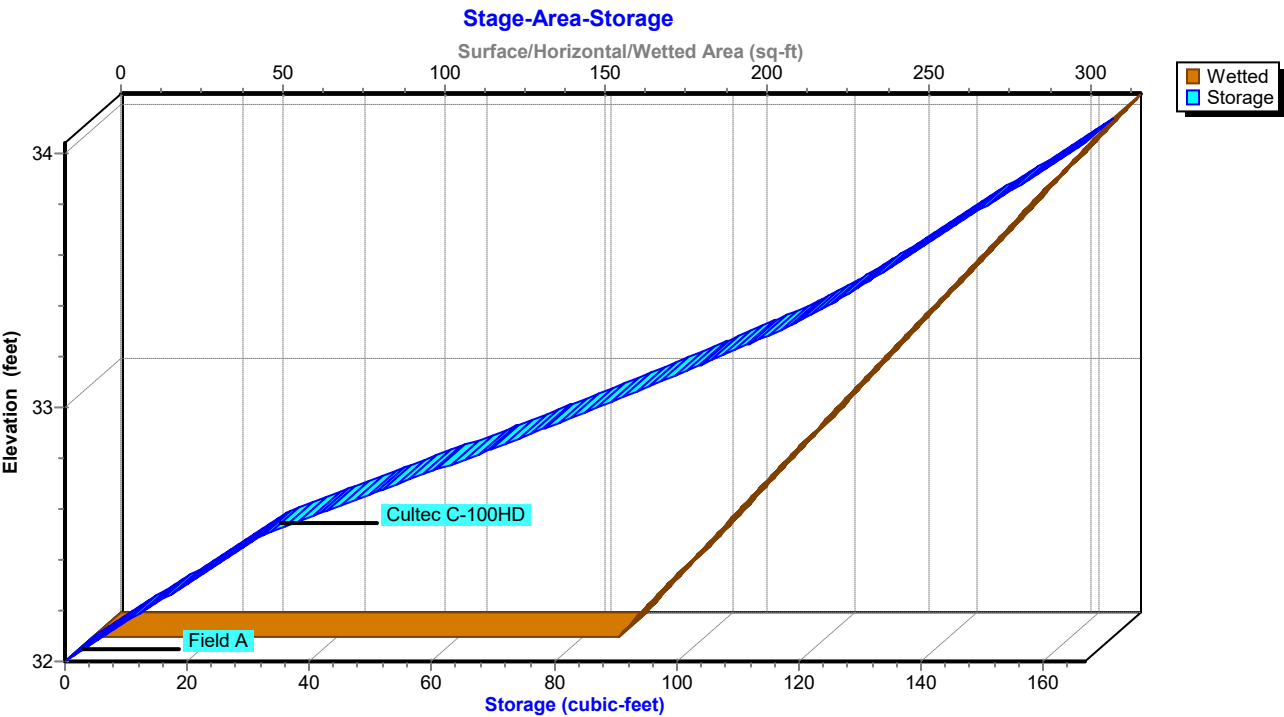


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Type III 24-hr 25-Year Rainfall=6.35"
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Page 29

Pond S1: CULTEC-SYSTEM #1



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Type III 24-hr 25-Year Rainfall=6.35"

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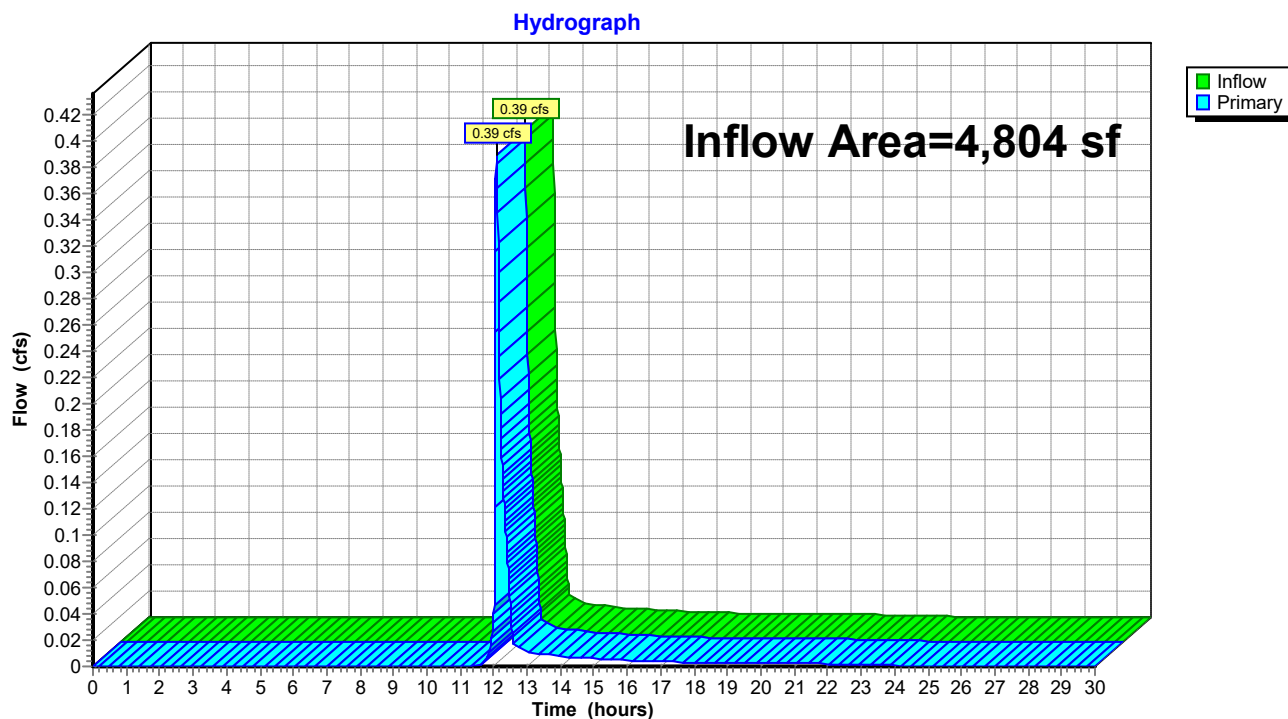
Page 30

Summary for Link DP: DISCHARGE POINT (STREET)

Inflow Area = 4,804 sf, 62.93% Impervious, Inflow Depth = 1.30" for 25-Year event
Inflow = 0.39 cfs @ 12.08 hrs, Volume= 519 cf
Primary = 0.39 cfs @ 12.08 hrs, Volume= 519 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

Link DP: DISCHARGE POINT (STREET)



PROPOSED*Type III 24-hr 100-Year Rainfall=8.16"*

Prepared by SPRUHAN ENGINEERING P.C.

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Page 31

Time span=0.00-30.00 hrs, dt=0.01 hrs, 3001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SC1: SC-1 Runoff Area=1,620 sf 100.00% Impervious Runoff Depth=7.92"
Tc=5.0 min CN=98 Runoff=0.31 cfs 1,069 cf

Subcatchment SC2: SC-2 Runoff Area=878 sf 100.00% Impervious Runoff Depth=7.92"
Tc=6.0 min CN=98 Runoff=0.16 cfs 579 cf

Subcatchment SC3: SC-3 Runoff Area=2,306 sf 22.77% Impervious Runoff Depth=2.56"
Tc=5.0 min CN=52 Runoff=0.16 cfs 493 cf

Pond S1: CULTEC-SYSTEM #1 Peak Elev=33.69' Storage=144 cf Inflow=0.47 cfs 1,649 cf
Discarded=0.06 cfs 1,253 cf Primary=0.41 cfs 396 cf Outflow=0.47 cfs 1,649 cf

Link DP: DISCHARGE POINT (STREET) Inflow=0.57 cfs 889 cf
Primary=0.57 cfs 889 cf

Total Runoff Area = 4,804 sf Runoff Volume = 2,142 cf Average Runoff Depth = 5.35"
37.07% Pervious = 1,781 sf 62.93% Impervious = 3,023 sf

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Type III 24-hr 100-Year Rainfall=8.16"

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Page 32

Summary for Subcatchment SC1: SC-1

Runoff = 0.31 cfs @ 12.07 hrs, Volume= 1,069 cf, Depth= 7.92"

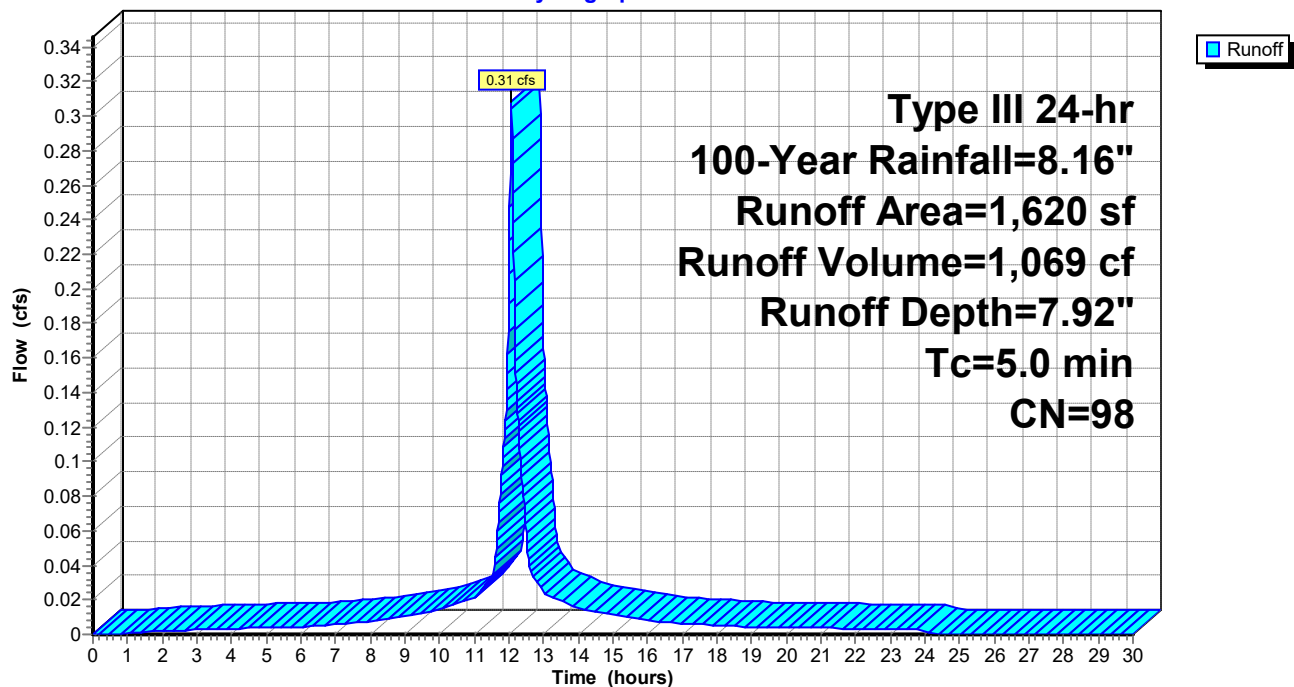
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.16"

Area (sf)	CN	Description
* 1,620	98	Roof (Proposed house & Covered Patio)
1,620		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment SC1: SC-1

Hydrograph



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Type III 24-hr 100-Year Rainfall=8.16"

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Page 33

Summary for Subcatchment SC2: SC-2

Runoff = 0.16 cfs @ 12.08 hrs, Volume= 579 cf, Depth= 7.92"

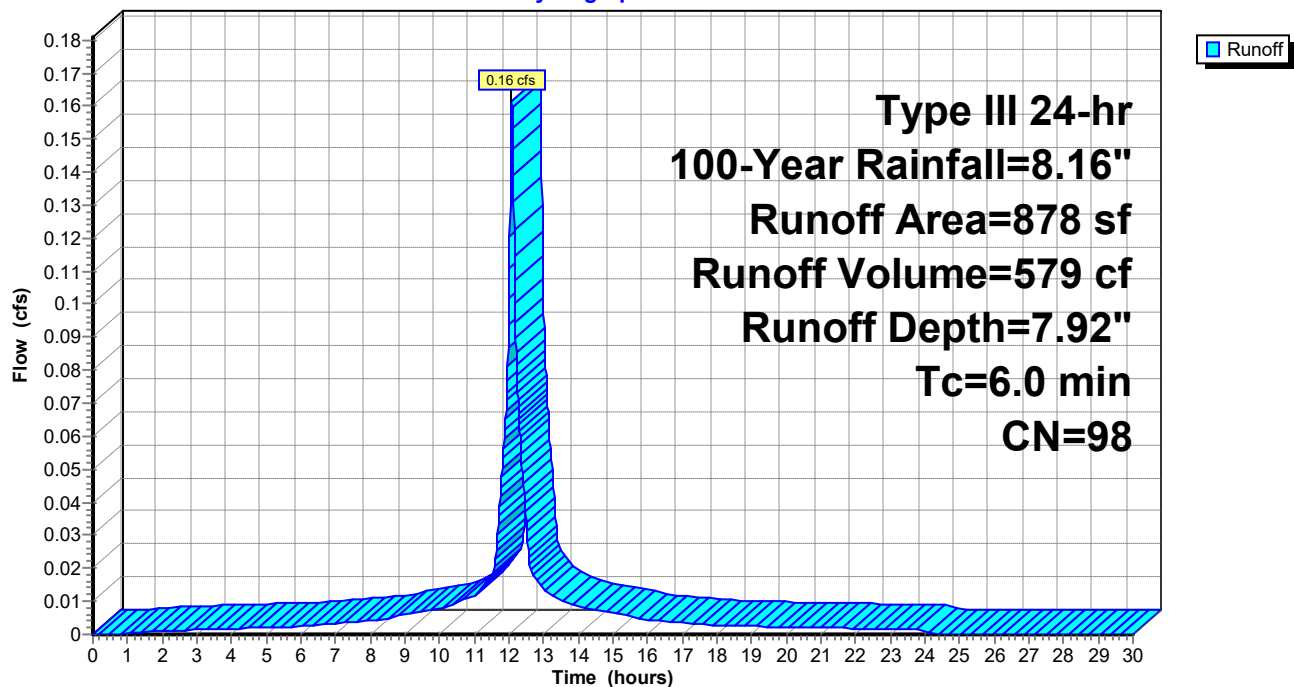
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.16"

Area (sf)	CN	Description
* 878	98	Paved driveway
878		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment SC2: SC-2

Hydrograph



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Type III 24-hr 100-Year Rainfall=8.16"

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Page 34

Summary for Subcatchment SC3: SC-3

Runoff = 0.16 cfs @ 12.08 hrs, Volume= 493 cf, Depth= 2.56"

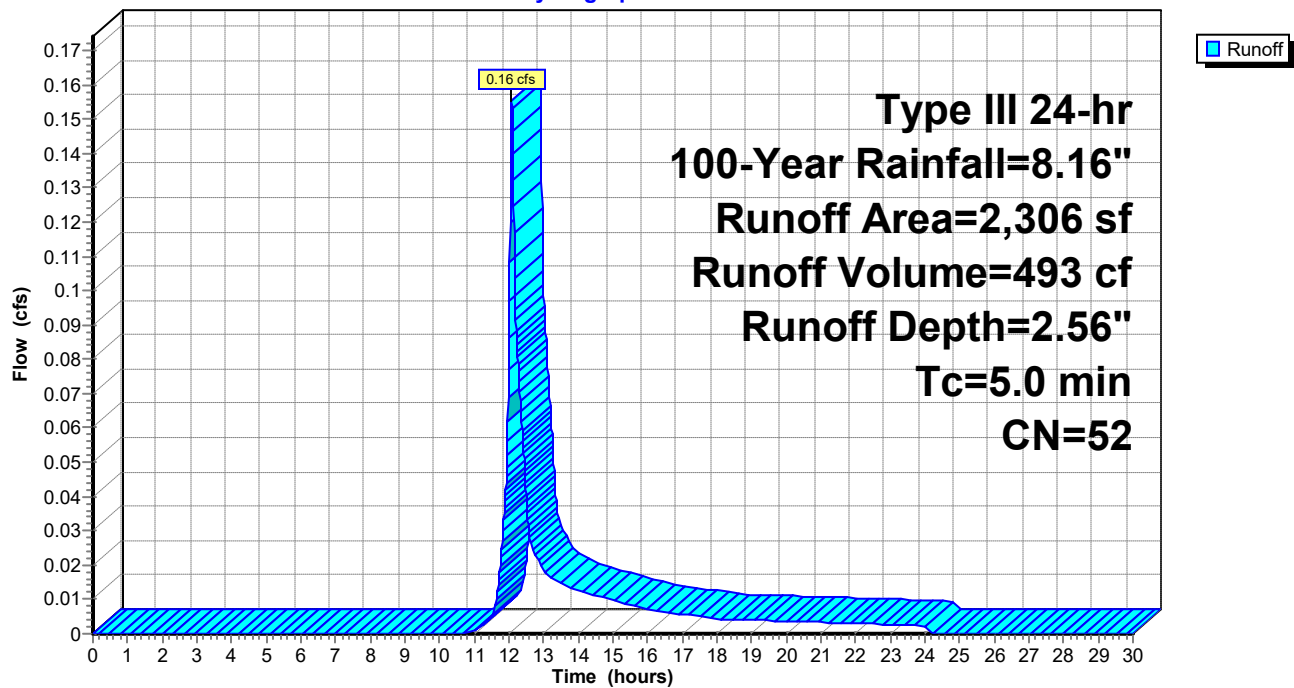
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.16"

	Area (sf)	CN	Description
*	525	98	Walkways, Steps & Landings
	1,781	39	>75% Grass cover, Good, HSG A
	2,306	52	Weighted Average
	1,781		77.23% Pervious Area
	525		22.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment SC3: SC-3

Hydrograph



PROPOSED

Type III 24-hr 100-Year Rainfall=8.16"

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Page 35

Summary for Pond S1: CULTEC-SYSTEM #1

Inflow Area = 2,498 sf, 100.00% Impervious, Inflow Depth = 7.92" for 100-Year event
 Inflow = 0.47 cfs @ 12.07 hrs, Volume= 1,649 cf
 Outflow = 0.47 cfs @ 12.08 hrs, Volume= 1,649 cf, Atten= 1%, Lag= 0.5 min
 Discarded = 0.06 cfs @ 12.08 hrs, Volume= 1,253 cf
 Primary = 0.41 cfs @ 12.08 hrs, Volume= 396 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 33.69' @ 12.08 hrs Surf.Area= 163 sf Storage= 144 cf

Plug-Flow detention time= 11.1 min calculated for 1,648 cf (100% of inflow)

Center-of-Mass det. time= 11.1 min (751.5 - 740.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	32.00'	110 cf	5.00'W x 32.50'L x 2.04'H Field A 332 cf Overall - 57 cf Embedded = 275 cf x 40.0% Voids
#2A	32.50'	57 cf	Cultec C-100HD x 4 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 1 rows
		167 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	32.00'	8.270 in/hr Exfiltration over Wetted area
#2	Primary	33.50'	6.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.06 cfs @ 12.08 hrs HW=33.69' (Free Discharge)
 ↑ **1=Exfiltration** (Exfiltration Controls 0.06 cfs)

Primary OutFlow Max=0.41 cfs @ 12.08 hrs HW=33.69' (Free Discharge)
 ↑ **2=Orifice/Grate** (Orifice Controls 0.41 cfs @ 2.10 fps)

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Type III 24-hr 100-Year Rainfall=8.16"

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Page 36

Pond S1: CULTEC-SYSTEM #1 - Chamber Wizard Field A

Chamber Model = Cultec C-100HD (Cultec Contactor® 100HD)

Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf

Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap

Row Length Adjustment= +0.50' x 1.86 sf x 1 rows

4 Chambers/Row x 7.50' Long +0.50' Row Adjustment = 30.50' Row Length +12.0" End Stone x 2 = 32.50' Base Length

1 Rows x 36.0" Wide + 12.0" Side Stone x 2 = 5.00' Base Width

6.0" Base + 12.5" Chamber Height + 6.0" Cover = 2.04' Field Height

4 Chambers x 14.0 cf +0.50' Row Adjustment x 1.86 sf x 1 Rows = 56.8 cf Chamber Storage

331.8 cf Field - 56.8 cf Chambers = 275.0 cf Stone x 40.0% Voids = 110.0 cf Stone Storage

Chamber Storage + Stone Storage = 166.8 cf = 0.004 af

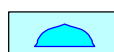
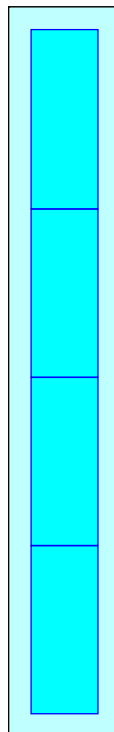
Overall Storage Efficiency = 50.3%

Overall System Size = 32.50' x 5.00' x 2.04'

4 Chambers

12.3 cy Field

10.2 cy Stone



PROPOSED

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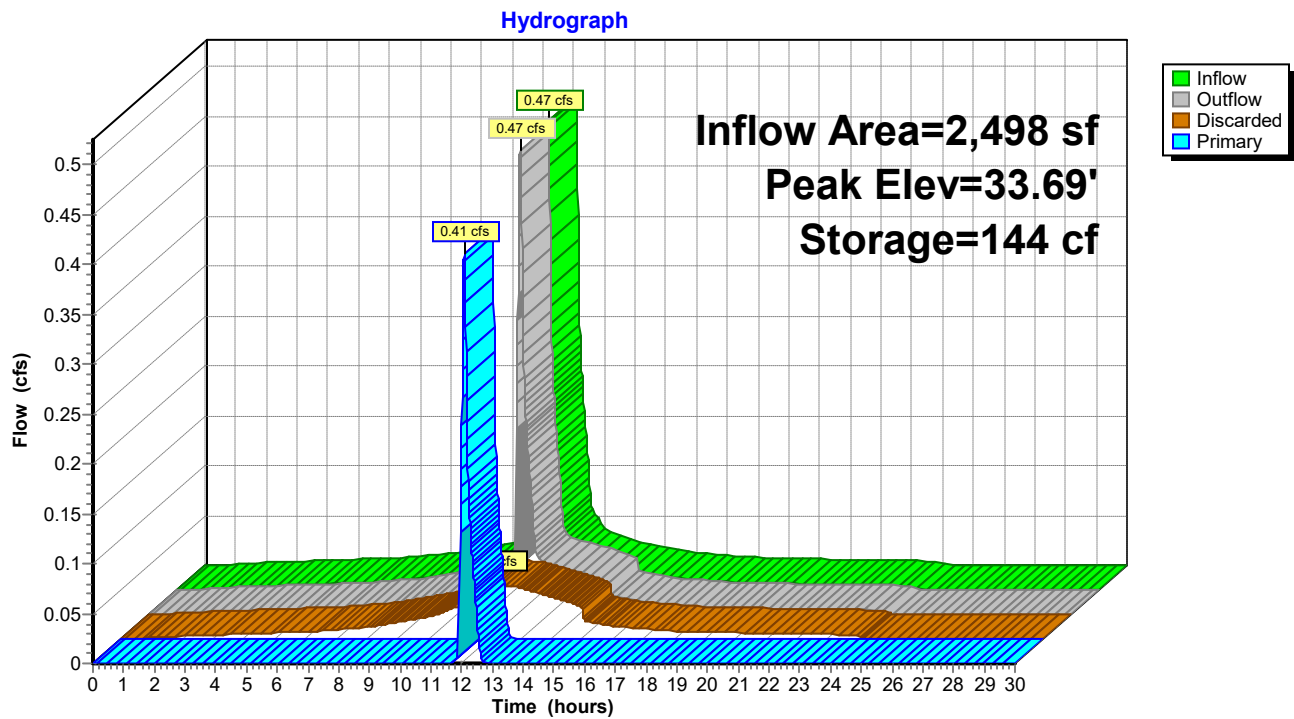
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Type III 24-hr 100-Year Rainfall=8.16"

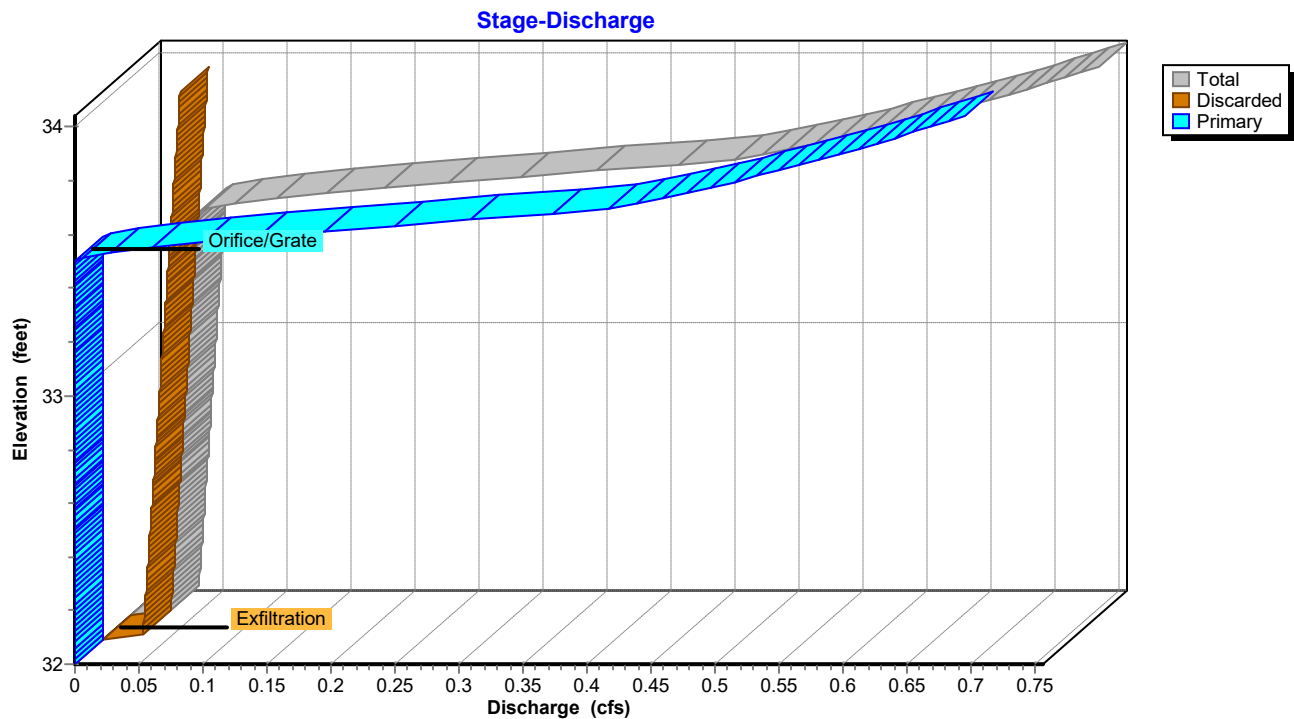
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Page 37

Pond S1: CULTEC-SYSTEM #1



Pond S1: CULTEC-SYSTEM #1

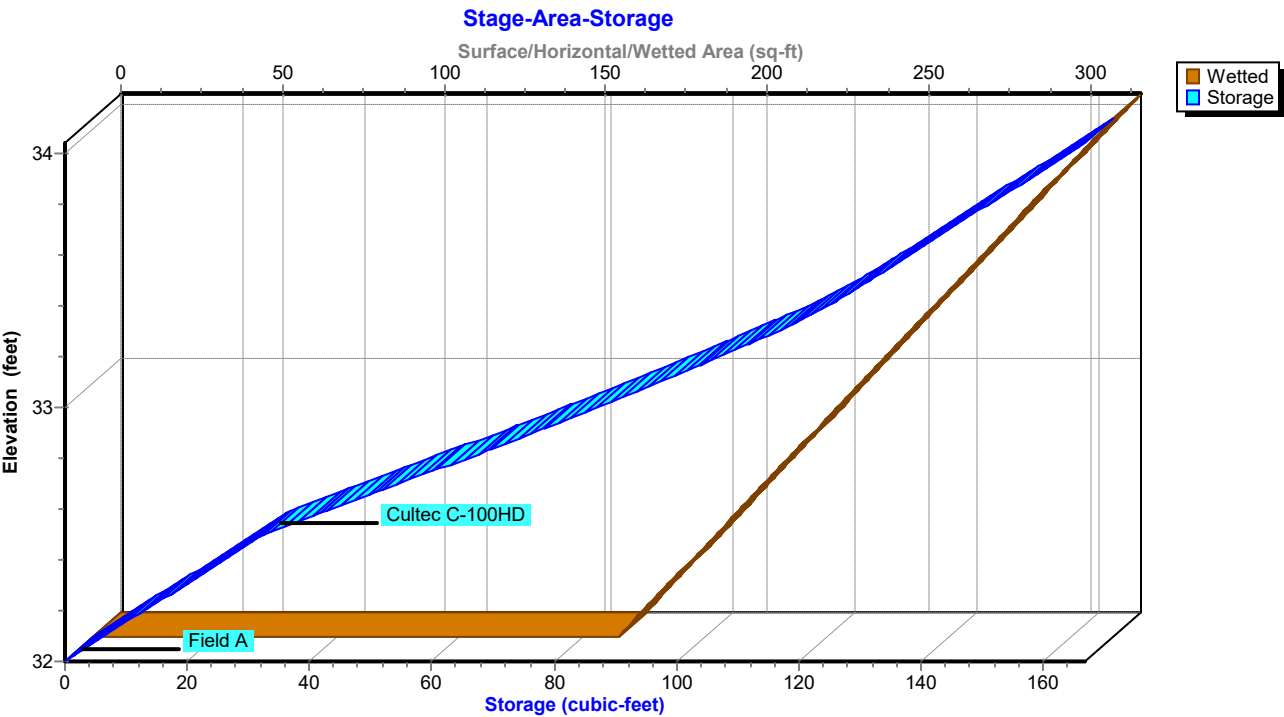


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Type III 24-hr 100-Year Rainfall=8.16"
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Pond S1: CULTEC-SYSTEM #1



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Type III 24-hr 100-Year Rainfall=8.16"

Printed 7/18/2025

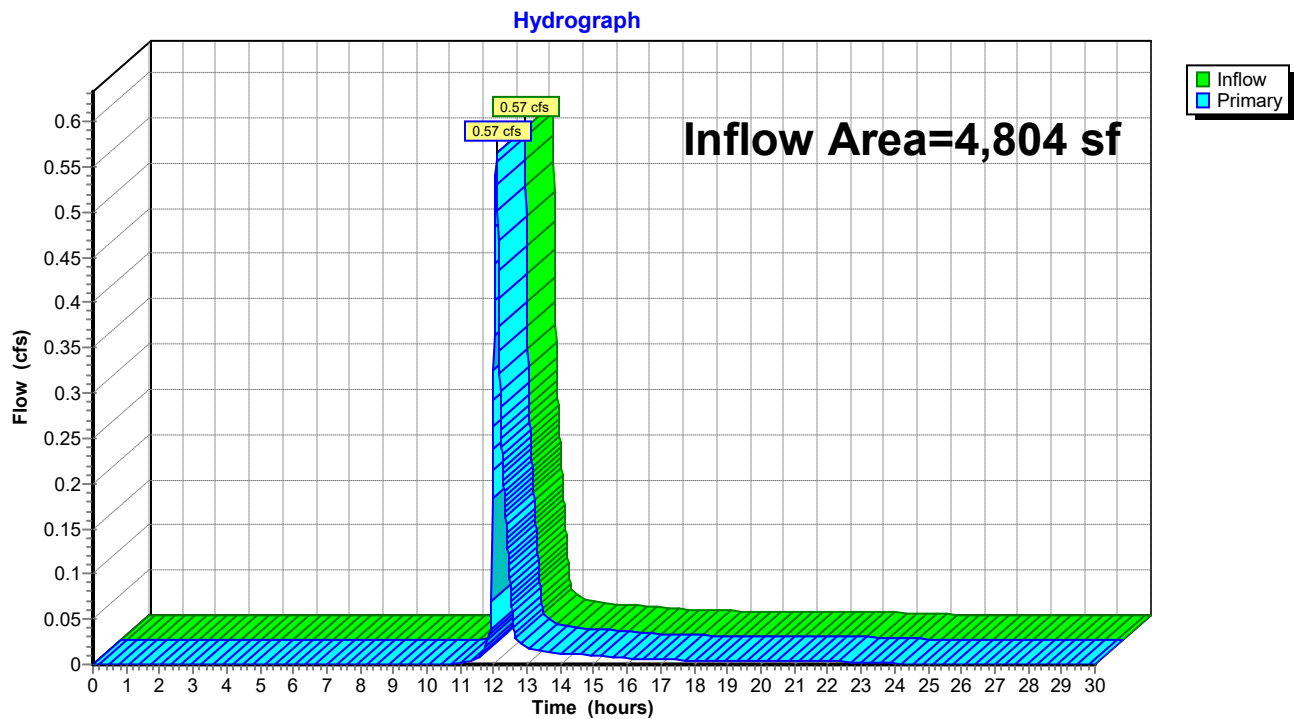
Page 39

Summary for Link DP: DISCHARGE POINT (STREET)

Inflow Area = 4,804 sf, 62.93% Impervious, Inflow Depth = 2.22" for 100-Year event
Inflow = 0.57 cfs @ 12.08 hrs, Volume= 889 cf
Primary = 0.57 cfs @ 12.08 hrs, Volume= 889 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

Link DP: DISCHARGE POINT (STREET)

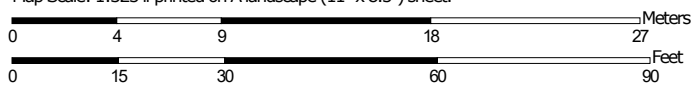


Appendix B – Soils Information

Custom Soil Resource Report Soil Map



Map Scale: 1:325 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Middlesex County, Massachusetts
Survey Area Data: Version 24, Aug 27, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 1, 2023—Sep 1, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
602	Urban land	0.2	100.0%
Totals for Area of Interest		0.2	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Middlesex County, Massachusetts

602—Urban land

Map Unit Setting

National map unit symbol: 9950

Elevation: 0 to 3,000 feet

Mean annual precipitation: 32 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 200 days

Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Excavated and filled land

Minor Components

Udorthents, wet substratum

Percent of map unit: 5 percent

Hydric soil rating: No

Rock outcrop

Percent of map unit: 5 percent

Landform: Ledges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Head slope

Down-slope shape: Concave

Across-slope shape: Concave

Udorthents, loamy

Percent of map unit: 5 percent

Hydric soil rating: No



**Legal Notice of a Public Hearing, Arlington Redevelopment Board
Docket #3866, 18 Grafton Street**

Notice is herewith given that an application has been filed on August 14, 2025, by Albert Azatyants, SA Development Corp, 200F Main St, Box 352, Stoneham, MA 02180, to open Docket #3866 in accordance with the provisions of the Town of Arlington Zoning Bylaw Sections 5.9.3, Site Plan Review. The applicant proposes to demolish an existing single-family dwelling and construct a four-unit residential building on the property located at 18 Grafton Street, Arlington, MA, in the R2 Residential District and Neighborhood Multi-Family Housing Overlay District.

A Public Hearing will be held on Monday, September 8, 2025, at 7:30 pm, Arlington Community Center, Main Hall, 27 Maple Street, Arlington, MA.

Plans may be viewed at the Department of Planning and Community Development on the first floor of the Town Hall Annex, 730 Massachusetts Avenue, Arlington, MA, during office hours (Mon-Wed, 8:00-4:00; Thu, 8:00-7:00; Fri, 8:00-12:00), or at arlingtonma.gov/arb.

**Arlington Redevelopment Board
Rachel Zsebery
Chair**

8/21/2025, 8/28/2025



Town of Arlington, Massachusetts
Department of Planning and Community Development
730 Massachusetts Avenue, Arlington, Massachusetts 02476

Public Hearing Memorandum

The purpose of this memorandum is to provide the Arlington Redevelopment Board and public with technical information and a planning analysis to ensure compliance with M.G.L. c.40A, § 3A

To: Arlington Redevelopment Board
From: Claire V. Ricker, AICP Secretary Ex-Officio
Subject: Site Plan Review, 18 Grafton Street, Docket #3866
Date: November 5, 2025

I. Docket Summary

This is an application by Albert Azatyants, SA Development Corporation, 200F Main Street Box 352, Stoneham, MA 02180 to open Site Plan Review Docket #3866 in accordance with the provisions of the Town of Arlington Zoning Bylaw Section 5.9.3 Site Plan Review.

The applicant proposes to demolish the existing single-family residence to construct a new multi-family building with six two-bedroom units. The applicant also proposes a driveway with three tandem vehicle parking spaces, including one with an ADA access aisle, and a storage shed with parking for ten bicycles. One affordable housing unit is required in accordance with Section 8.2 Affordable Housing Requirements.

Materials submitted for consideration of this application include:

- Application for Site Plan Review, dated August 8, 2025;
- Impact Statement, including LEED Checklist, and letter from applicant regarding LEED certification, dated October 2, 2025;
- Sustainability Analysis, dated August 6, 2025;
- Photographs of existing conditions, dated August 8, 2025;
- Architectural Site Plan of Proposal including Dimensional and Parking Information, dated October 2, 2025;
- Architectural Drawings and Renderings including proposed materials, dated October 1, 2025;
- Rooftop Solar Readiness study, dated August 8, 2025;
- Civil Plan and Details, dated September 28, 2025;
- Erosion Control and Demolition Plan, dated August 1, 2025;
- Stormwater Report, dated July 21, 2025.

The subject property is located within the R-2 Residential Two-Family zoning district and the Neighborhood Multi-Family (NMF) Overlay District, which the applicant has elected to apply to this development.

Section 5.9, Multi-Family Housing Overlay Districts, provides a process for the Arlington Redevelopment Board to review and potentially impose reasonable conditions through Site Plan Review for As of Right Development proposals located within a Multi-Family Housing Overlay District. The ARB shall provide Site Plan Review for projects using the Environmental Design Review Standards set forth in Section 3.4.4. of the Zoning Bylaw.

II. Multi-Family Housing Overlay Districts (Arlington Zoning Bylaw Section 5.9.2)

All site plan reviews applicable to developments under Section 5.9 shall be consistent with the purposes of Section 5.9 and with M.G.L. c. 40A, § 3A, and any Compliance Guidelines issued thereunder, as amended. The purposes of the Multi-Family Housing Overlay Districts are:

- A. To respond to the local and regional need for housing by enabling development of a variety of housing types,
- B. To respond to the local and regional need for affordable housing by allowing for a variety of housing types with affordable housing requirements,
- C. To promote multi-family housing near retail services, offices, civic, and personal service uses, thus helping to ensure pedestrian-friendly development by allowing higher density housing in areas that are walkable to shopping and local services,
- D. To reduce dependency on automobiles by providing opportunities for upper-story and multi-family housing near public transportation,
- E. To encourage environmental and climate protection sensitive development,
- F. To encourage economic investment in the redevelopment of properties,
- G. To encourage residential uses to provide a customer base for local businesses, and
- H. To ensure compliance with M.G.L. c. 40A, § 3A.

III. Site Plan Review/ Environmental Design Standards (Arlington Zoning Bylaw, Sections 5.9.3 and 3.4.4)

1. SPR/EDR-1 Preservation of Landscape

The landscape shall be preserved in its natural state, insofar as practicable, by minimizing tree and soil removal, and any grade changes shall be in keeping with the general appearance of neighboring developed areas.

The applicant is proposing to expand the footprint of the building to be demolished from approximately 1,327 square feet to approximately 1,643 square feet, an increase of about 19%. As there is no landscape minimum under the NMF Overlay District, the proposed landscape area will be similar to existing conditions, with lawn areas planned for the front and rear yards. The architectural site plan also shows landscape plantings throughout the site in the front and rear yards including at least three trees. Two mature street trees will remain and be protected throughout construction of the project. There will be no substantial changes to the existing grade.

2. SPR/EDR-2 Relation of the Building to the Environment

Proposed development shall be related harmoniously to the terrain and to the use, scale, and architecture of the existing buildings in the vicinity that have functional or visible relationship to the proposed buildings. The Arlington Redevelopment Board may require a modification in massing so as to reduce the effect of shadows on the abutting property in an R0, R1 or R2 district or on public open space.

The subject property is zoned R-2 Residential Two-Family and is within the Neighborhood Multi-Family (NMF) Overlay District on an irregular lot. The neighborhood includes a mix of single, two-, four-, and eight-family properties. The proposed development is consistent with the scale and density of the neighboring properties and maintains the same orientation and relationship to the street as the existing single-family structure. The building incorporates dormers at the third floor, which reflects the architectural context of the adjacent properties. The exterior facade materials and colors are similar to other buildings along the street.

3. SPR/EDR-3 Open Space

All open space (landscaped and usable) shall be so designed as to add to the visual amenities of the vicinity by maximizing its visibility for persons passing by the site or overlooking it from nearby properties. The location and configuration of usable open space shall be so designed as to encourage social interaction, maximize its utility and facilitate maintenance.

The building will be enhanced with perennial plantings, shrubs, groundcovers, and permeable pavers to maximize visibility for passersby and encourage social interaction. A common rear-yard patio is proposed, along with lawn areas planned for the front and rear of the property, which is consistent with the current layout and existing conditions.

4. SPR/EDR-4 Circulation

With respect to vehicular and pedestrian and bicycle circulation, including entrances, ramps, walkways, drives, and parking, special attention shall be given to location and number of access points to the public streets (especially in relation to existing traffic controls and mass transit facilities), width of interior drives and access points, general interior circulation, separation of pedestrian and vehicular traffic, access to community facilities, and arrangement of vehicle parking and bicycle parking areas, including bicycle parking spaces required by Section 6.1.12 that are safe and convenient and, insofar as practicable, do not detract from the use and enjoyment of proposed buildings and structures and the neighboring properties.

The applicant is proposing to access the property via foot, bicycle, and automobile. The 16.7' wide driveway provides tandem parking for three vehicles, including one with an ADA accessible aisle; each will provide connections for electric vehicle charging stations. There will be a bicycle parking shed located at the rear of the driveway which will include covered, long-term parking for ten bicycles utilizing a two-tier bicycle storage system with a lift-assist system in accordance with Section 6.1.12 of the Zoning Bylaw. There are two short-term bicycle parking spaces proposed in the front yard.

The applicant has not submitted a Transportation Demand Management plan to request a parking reduction from the Board.

5. SPR/EDR-5 Surface Water Drainage

Special attention shall be given to proper site surface drainage so that removal of surface waters will not adversely affect neighboring properties or the public storm drainage system. Available Best Management Practices for the site should be employed, and include site planning to minimize impervious surface and reduce clearing and re-grading. Best Management Practices may include erosion control and stormwater treatment by means of swales, filters, plantings, roof gardens, native vegetation, and leaching catch basins. Stormwater should be treated at least minimally on the development site; that which cannot be handled on site shall be removed from all roofs, canopies, paved and pooling areas and carried away in an underground drainage system. Surface water in all paved areas shall be collected in intervals so that it will not obstruct the flow of vehicular or pedestrian traffic and will not create puddles in the paved areas.

In accordance with Section 3.3.4., the Board may require from any applicant, after consultation with the Director of Public Works, security satisfactory to the Board to ensure the maintenance of all stormwater facilities such as catch basins, leaching catch basins, detention basins, swales, etc. within the site. The Board may use funds provided by such security to conduct maintenance that the applicant fails to do.

The Board may adjust in its sole discretion the amount and type of financial security such that it is satisfied that the amount is sufficient to provide for any future maintenance needs.

The applicant has submitted a stormwater report and civil plan for treatment of run-off on site. The applicant will apply best stormwater practices and comply with the Town's Stormwater Management bylaw, during and after construction, as approved by the Town Engineer.

6. SPR/EDR-6 Utilities Service

Electric, telephone, cable TV, and other such lines of equipment shall be underground. The proposed method of sanitary sewage disposal and solid waste disposal from all buildings shall be indicated.

All utilities will be located underground. The water and sewer connections are indicated on the proposed civil plan. A dedicated 4" water line will provide water for the fire suppression system.

7. SPR/EDR-7 Advertising Features

The size, location, design, color, texture, lighting and materials of all permanent signs and outdoor advertising structures or features shall not detract from the use and enjoyment of proposed buildings and structures and the surrounding properties.

As this is a residential project, no permanent signage is proposed. A standard real estate sign will be displayed at the front of the property for building vacancies as necessary.

8. SPR/EDR-8 Special Features

Exposed storage areas, exposed machinery installations, service areas, truck loading areas, utility buildings and structures, and similar accessory areas and structures shall be subject to such setbacks, screen plantings or other screening methods as shall reasonably be required to prevent their being incongruous with the existing or contemplated environment and the surrounding properties.

The applicant proposes to convert an existing garage into a bicycle parking shed with ten bike parking spaces located at the rear of the driveway.

9. SPR/EDR-9 Safety

With respect to personal safety, all open and enclosed spaces shall be designed to facilitate building evacuation and maximize accessibility by fire, police and other emergency personnel and equipment. Insofar as practicable, all exterior spaces and interior public and semi-public spaces shall be so designed to minimize the fear and probability of personal harm or injury by increasing the potential surveillance by neighboring residents and passersby of any accident or attempted criminal act.

The interior and exterior of the buildings have been designed to facilitate building evacuation. The building will also include a fire suppression system. The proposed property will provide access to the building for fire, police and other emergency personnel and equipment from Grafton Street.

10. SPR/ EDR-10 Heritage

With respect to Arlington's heritage, removal or disruption of historic, traditional or significant uses, structures or architectural elements shall be minimized insofar as practical whether these exist on the site or on adjacent properties.

The property at 18 Grafton Street is not listed on the *Inventory of Historically or Architecturally Significant Properties in the Town of Arlington*.

11. SPR/EDR-11 Microclimate

With respect to the localized climatic characteristics of a given area, any development which proposes new structures, new hard surface, ground coverage or the installation of machinery which emits heat, vapor or fumes shall endeavor to minimize insofar as practicable, any adverse impacts on light, air and water resources or on noise and temperature levels of the immediate environment.

The total proposed impervious area will be greater than existing site conditions, however the addition of new native plantings and trees will have a positive impact on the immediate environment.

12. SPR/EDR-12 Sustainable Building and Site Design

Projects are encouraged to incorporate best practices related to sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality. Applicants must submit a current Green Building Council Leadership in Energy and Environmental Design (LEED) checklist, appropriate to the type of development, annotated with narrative description that indicates how the LEED performance objectives will be incorporated into the project.

This applicant has completed a LEED checklist and provided a summary of the sustainable practices that will be incorporated into the design of the development. In addition, the development will comply with the Town's Specialized Stretch Energy Code and the Fossil Fuel-Free Bylaw which ensure a maximum level of energy efficiency is achieved.

IV. Findings

1. The project as proposed is not in compliance with dimensional requirements in Section 5.8.4 Development Standards of the Zoning Bylaw.
2. The project as proposed is not in compliance with the requirements for inclusion in the Chapter 40B Subsidized Housing Inventory as outlined in Section 8.2 Affordable Housing Requirements of the Zoning Bylaw.



Town of Arlington, Massachusetts

Public Hearing: Docket #3869, 1513-1515 and 1517-1519 Mass Ave (continued from October 6)

Summary:

8:25 pm

Notice is herewith given that an application has been filed on August 27, 2025, by Yevgeny Bernshtein, IG Investments LLC, 226 Harvard Street, Brookline, MA 02446, to open Special Permit Docket #3869 in accordance with the provisions of MGL Chapter 40A § 11, and the Town of Arlington Zoning Bylaw Sections 3.3, Special Permits, and 3.4, Environmental Design Review. The applicant proposes to demolish the existing single-family and two-family buildings and construct a mixed-use building containing 15 residential units and one commercial unit on the property located at 1513-1515 and 1517-1519 Massachusetts Ave, Arlington, MA, in the B2A Neighborhood Office District.

- DPCD staff will be provided 5 minutes for an overview of their Public Hearing Memorandum.
- Applicant will be provided 10 minutes for an introductory presentation.
- Members of the public will be provided time to comment.
- Board members will discuss Docket and may vote.

ATTACHMENTS:

Type	File Name	Description
Application	01_1513-1519_Mass_Ave_-_EDR_Special_Permit_application_-_rec_d_08-18-2025.pdf	1513-1519 Mass Ave - EDR Special Permit application - rec'd 08-18-2025
Application	02_1513-1519_Mass_Ave_-_Impact_Statement_-_rec_d_08-18-2025.pdf	1513-1519 Mass Ave - Impact Statement - rec'd 08-18-2025
Application	03_1513-1519_Mass_Ave_-_Photos_of_Existing_Conditions_-_rec_d_08-18-2025.pdf	1513-1519 Mass Ave - Photos of Existing Conditions - rec'd 08-18-2025
Application	04_1513-1519_Mass_Ave_-_Plans_and_Drawings_-_07-29-2025.pdf	1513-1519 Mass Ave - Plans and Drawings - 07-29-2025
Application	05_1513-1519_Mass_Ave_-_Landscaping_Plan_-_08-06-2025.pdf	1513-1519 Mass Ave - Landscaping Plan - 08-06-2025
Application	06_1513-1519_Mass_Ave_-_LEED_Checklist___Narrative_08-18-2025.pdf	1513-1519 Mass Ave - LEED Checklist & Narrative 08-18-2025
Application	07_1513-1519_Mass_Ave_-_Solar_Assessment_-_12-19-2024.pdf	1513-1519 Mass Ave - Solar Assessment - 12-19-2024
Application	08_1513-1519_Mass_Ave_-_Proposed_Plot_Plan_-_07-11-2025.pdf	1513-1519 Mass Ave - Proposed Plot Plan - 07-11-2025
Application	09_1513-1519_Mass_Ave_-_Civil_Plan_-_07-21-2025.pdf	1513-1519 Mass Ave - Civil Plan - 07-21-2025
Application	10_1513-1519_Mass_Ave_-_Civil_Engineering_Design_-_07-31-2025.pdf	1513-1519 Mass Ave - Civil Engineering Design - 07-31-2025
	11_1513-1519_Mass_Ave_-_	

- Application

_Operations___Maintenance_Plan_-_07-22-2025.pdf

1513-1519 Mass Ave - Operations & Maintenance Plan - 07-22-2025
- Application

12_1513-1519_Mass_Ave_-_Stormwater_Report_-_07-31-2025.pdf

1513-1519 Mass Ave - Stormwater Report - 07-31-2025
- Application

Docket_3869_1513-1519_Mass_Ave_-_Legal_Notice_9-18__9-25.pdf

Docket 3869 1513-1519 Mass Ave - Legal Notice 9-18, 9-25
- Application

2025-11-05__EDR_memo_-_1513-1519_Mass_Ave.pdf

2025-11-05 EDR memo - 1513-1519 Mass Ave

2025 AUG 27 PM 2: 50

1513-1515 & 1517-1519 Mass Ave

REQUIRED SUBMITTALS CHECKLIST

DOCKET 3869

One electronic copy of your application is required; print materials may be requested, Review the ARB's Rules and Regulations, which can be found at www.arlingtonma.gov/arb, for the full list of required submittals.

☒ **Application Cover Sheet (project and property information, applicant information)**

☒ **Dimensional and Parking Information Form (see attached)**

☒ **Impact statement**

Statement should respond to Environmental Design Review (Section 3.4) and Special Permit (Section 3.3) criteria on pages 6-8 of this packet); include:

- LEED checklist and sustainable building narrative as described in criteria 12.
- Summary of neighborhood outreach, if held or planned.

☒ **Drawing and photographs of existing conditions**

- Identify boundaries of the development parcel and illustrate the existing conditions on that parcel, adjacent streets, and lots abutting or directly facing the development parcel across streets.
- Photographs showing conditions on the development parcel at the time of application and showing structures on abutting lots.

☒ **Site plan of proposal. Must include:**

- Zoning boundaries, if any, and parcel boundaries;
- Setbacks from property lines;
- Site access/egress points;
- Circulation routes for pedestrians, bicyclists, passenger vehicles, and service/delivery vehicles;
- New buildings and existing buildings to remain on the development parcel, clearly showing points of entry/exit;
- Other major site features within the parcel or along its perimeter, including but not limited to trees, fences, retaining walls, landscaped screens, utility boxes, and light fixtures;
- Spot grades or site topography and finish floor level;
- Open space provided on the site;
- Any existing or proposed easements or rights of way.

☒ **Drawings of proposed structure**

- Schematic drawings of each interior floor of each proposed building, including basements.
- Schematic drawings of the roof surface(s), identifying roof materials, mechanical equipment, screening devices, green roofs, solar arrays, usable outdoor terraces, and parapets.
- Elevations of each exterior façade of each building, identifying floor levels, materials, colors, and appurtenances such as mechanical vents and light fixtures.
- Drawings from one or more prominent public vantage point illustrating how the proposed project will appear within the context of its surroundings.
- Graphic information showing façade materials and color samples.
- Include lighting plan and fixtures if not provided on site or landscaping plan.

TOWN CLERK
ARLINGTON, MA. 02476
2025 AUG 27 PM 3: 09



Vehicle, Bicycle, and Service Vehicle Plans

- Parking and loading plans, including all vehicle and bicycle parking facilities located on the parcel or within a structure, showing dimensions of spaces, driveways, access aisles, and access/egress points. Include line-of-sight and turning radius along with length and type of delivery truck.
- If you are requesting a reduction in the amount of required parking, include a Transportation Demand Management Plan per Section 6.1.5.
- Plans of all bicycle parking facilities located on the lot and within any structure, including dimensions of spaces and access routes and types of bicycle racks.



Sustainable Building and Site Design Elements

- A solar energy systems assessment per Section 6.4, which must include:
 - An analysis for solar energy system(s) for the site detailing layout and annual production;
 - The maximum feasible solar zone area of all structures; and,
 - Drawings showing the solar energy system you propose, with a narrative describing the system, the reasons the system was chosen, and how the system meets the requirements of Section 6.4; or
 - A detailed explanation of why the project meets an exemption of Section 6.4.2.
- LEED checklist and narrative per EDR criterion 13.



Proposed landscaping (*may be incorporated into site plan*)

Schematic drawing(s) illustrating and clearly labels all landscape features, including hardscape materials, permeable areas, plant species, and light fixtures.



Plans for sign permits, if signage is an element of development proposal



Stormwater management plan

(for stormwater management during construction for projects with new construction)



SketchUp Compatible Model, if required



Application fee

(See [Rule 12 of the ARB Rules and Regulations](#) for how to calculate the fee)

FOR OFFICE USE ONLY

Docket #: 3869

_____ Special Permit Granted

Date: _____

_____ Received evidence of filing with Registry of Deeds

Date: _____

_____ Notified Building Inspector of Special Permit filing

Date: _____

2025 AUG 27 PM 2: 50

TOWN CLERK
ARLINGTON, MA. 02476
COVER SHEET

DOCKET 3869

Application for Special Permit in Accordance with Environmental Design Review

PROPERTY AND PROJECT INFORMATION

- Property Address 1513-1515 & 1517-1519 Massachusetts Avenue
Assessors Block Plan, Block, Lot No. 62-1-10 & 62-1-11.A Zoning District B2A Major Business
- Deed recorded in the Registry of deeds, Book 82774, Page 20
or- registered in Land Registration Office, Cert. No. _____, in Book _____, Page _____.
- Present Use of Property (include # of dwelling units, if any)
2-Family and 1-Family Dwellings
- Proposed Use of Property (include # of dwelling units, if any)
Mixed-Use Building Containing 15 Residential Units and 1 Commercial Space

APPLICANT INFORMATION

- Applicant:** Identify the person or organization requesting the Special Permit:
Name of Applicant(s) Yevgeny Bernshtein
Organization IG Investments LLC
Address 226 Harvard Street Brookline, MA 02446
Street City, State, Zip
Phone 617-383-5659 Email Gene@riseboston.com
- Applicant Interest:** the applicant must have a legal interest in the subject property:
☒ Property owner ☐ Purchaser by land contract
☐ Purchaser by option or purchase agreement ☐ Lessee/tenant
- Property Owner** ☒ Check here if applicant is also property owner
Identify the person or organization that owns the subject property:
Name _____ Title _____
Organization _____ Phone _____
Address _____
Street City, State, Zip
Phone _____ Email _____

Application for Special Permit Under Environmental Design Review

Name Matthew Eckel Title Attorney

Organization Fletcher Tilton PC Phone 508-459-8097

Address 100 Front Street, 5th Floor Worcester, MA 01608

Street City, State, Zip

Phone 508-459-8097 Email meckel@flechertilton.com

3.3	Request for Special Permit
3.4	Request for Environmental Design Review
section(s)	title(s)

6.1.12.A	Bike Parking Reduction
section(s)	title(s)

226 Harvard Street, Brookline, MA 02446	617-383-5659
Address	Phone

DIMENSIONAL AND PARKING INFORMATION

Property Location: 1513-1515 & 1517-1519 Massachusetts Ave

Zoning District: B2A Major Business

Applicant: IG Investments LLC

Address: 226 Harvard Street, Brookline, MA

Present Use/Occupancy: No. of Dwelling Units:
two 2-family buildings

Uses and their gross square feet:
Residential

Proposed Use/Occupancy: No. of Dwelling Units:
Mixed-used, Multi-family, 15 residential unit, 1 retail space

Uses and their gross square feet:
Residential sf, Commercial 593 sf

	Present Conditions	Proposed Conditions	Min. or Max. Req'd by Zoning for Proposed Use	
Lot Size	4,470 + 4,500	8970	min.	none
Frontage	42.52' + 55.48'	98'	min.	50'
Floor Area Ratio ¹	approx. .52	+/- 2.25	max.	3.0
Lot Coverage (%), where applicable	21%		max.	N/A
Lot Area per Dwelling Unit (sf)	2,243	598	min.	N/A
Front Yard Depth (feet)	6.6'	0'	min.	0
Side Yard Width (feet)	right side	13.8'	min.	0
	left side	10.8'	min.	0
Rear Yard Depth (feet)	4.3'	10'	min.	10'
Height	stories	2 1/2	stories ²	4
	feet	29.9'	Feet	50
Open Space (% of G.F.A.) ³		15%	min.	15%
	Landscaped (sf)	1,350	(sf)	15%
	Usable (sf)		(sf)	N/A
Parking Spaces (#) ⁴	approx. 4	15	min.	15
Parking Area Setbacks (feet) (where applicable)			min.	
Loading Spaces (#)	0	0	min.	0
Bicycle Parking ⁵	short term	4	min.	1.5 + .5 = 2
	long term	8	min.	22.5 + .3 = 23

¹ FAR is based on Gross Floor Area. See Section 5.3.22 for how to calculate Gross Floor Area. On a separate page, provide the calculations you used to determine FAR, including the calculations for Gross Floor Area.

² Where two heights are noted in the dimensional tables, refer to Section 5.3.19, Reduced Height Buffer Area to determine the applicable height or the conditions under which the Board may provide relief.

³ Per Section 5.3.22(C), district dimensional requirements are calculated based on GFA. On a separate page, show how you determined the open space area amounts.

⁴ See Section 6.1, Off-Street Parking. If requesting a parking reduction, refer to Section 6.1.5.

⁵ See Section 6.1.12, Bicycle Parking, or refer to the [Bicycle Parking Guidelines](#).

**TOWN OF ARLINGTON
ARLINGTON REDEVELOPMENT BOARD**

RE: 1513-1519 MASSACHUSETTS AVENUE, ARLINGTON, MASSACHUSETTS
APPLICANT: IG INVESTMENTS LLC
ARLINGTON REDEVELOPMENT BOARD – IMPACT STATEMENT

Introduction:

IG Investments LLC (the “**Applicant**”) is proposing to redevelop the parcels known as 1513-1515 & 1517-1519 Massachusetts Avenue. By this Application, the Applicant seeks to meet the burgeoning needs of the Town of Arlington to develop new structures providing valuable residential and commercial uses and creating housing and employment opportunities.

The proposed project includes razing the two existing structures and erecting a new mixed-use building with fifteen residential units, one commercial office space, and fifteen parking spaces (the “**Project**”). The Project includes a significant amount of site and landscaping improvements.

The Applicant now seeks approval from the Arlington Redevelopment Board pursuant to the powers granted to them through section 3.4 of the Town of Arlington Zoning Bylaw.

Existing Conditions:

Under existing conditions, the Development Site contains two separate lots. One lot, known as 1513-1515 Mass Ave and containing approximately 4,505 square feet currently, is occupied by an existing two-family structure. The second lot, known as 1517-1519 Mass Ave, is approximately 4,470 square feet and contains a neglected structure identified as a single-family home, which has fallen into a state of despair. The property is surrounded by a mixture of residential and commercial properties along Mass Ave and the Minuteman Commuter Bikeway in the rear.

Proposed Use:

The Applicant proposes to demolish in its entirety, the existing structures. The Applicant will combine the existing parcels into a new lot which will contain approximately 8,975 square feet. The Applicant will also erect a new four-story mixed-use structure which will contain fifteen residential condominium units, one commercial office space, and fifteen parking spaces.

The Site is proposed to be accessed via a curb cut along Mass Ave which will provide access to a first-floor parking facility containing fifteen parking spaces. The parking spaces facility will include electric vehicle charging stations as well bike parking spaces. The first floor will also contain a residential lobby, sprinkler room, commercial space, with their own dedicated entrance and trash storage. The Project also includes proposed site improvements including a full landscaping plan. The addition of the proposed residential and commercial uses will bring activity and vibrancy to this section of Mass Ave. The location of the development is extremely conducive to these uses given its proximity to other commercial uses in both Arlington and Lexington as well

as its proximity to the several bus lines. Existing infrastructure in the form of roadways and traffic signals are well designed to absorb any additional impact from the proposed uses. This development will provide valuable new residential units and a commercial use promoting pedestrian activity and an active streetscape.

The Applicant is seeking a Special Permit relating to the proposed mixed-use building. The Applicant is also seeking approval through the Environmental Design Review process, which will require relief and waivers from certain other requirements such as bicycle parking.

Special Permit Findings:

Per the Town of Arlington Zoning By-Law under Section 3.3 the Arlington Redevelopment Board has the power to grant Special Permits. Per Section 3.3.3 Special Permits shall be granted by the Permit Granting Authority only upon its written determination that the adverse effects of the proposed use will not outweigh its beneficial impacts to the town or the neighborhood, in view of the characteristics of the site and of the proposal in relation to that site. The determination shall include findings that all of the following criteria for granting a Special Permit are met:

- A. The use requested is listed as a Special Permit use in the use regulations for the applicable district or is so designated elsewhere in this Bylaw.

As per Section 5.5.3, Use Regulations for Business Districts, a mixed-use development is allowed by Special Permit in a B2-A district.

- B. The requested use is essential or desirable to the public convenience or welfare.

The proposed uses are essential and desirable. The Project contains both residential units and a commercial space. The residential units will provide both market rate and affordable housing opportunities for a range of family sizes. Additionally, the commercial space will promote street activity and employment opportunities and the mixed-use building, will bring vibrancy to this part of Mass Ave, as well as increase the tax base for the parcel.

- C. The requested use will not create undue traffic congestion or unduly impair pedestrian safety.

The use will not create traffic congestion or impair pedestrian safety. The Project proposes a single curb cut providing vehicular and bicycle access into the parking facility. The Project proposes one to one parking per residential unit and is utilizing the parking exemption for the first 3,000 square feet of commercial space in a mixed-use development per section 6.1.C in an effort to reduce reliance on motor vehicles and vehicular traffic. The Project includes both long-term and short-term bicycle parking and is located along multiple bus routes which will promote alternate means of transportation.

- D. The requested use will not overload any public water, drainage, sewer system or any other municipal system to such an extent that the requested use or any developed use in the

immediate area or in any other of the Town will be unduly subjected to hazards affecting health, safety or the general welfare.

The Project will not overload any public water, drainage, sewer system or other municipal system. Additionally, a full stormwater management plan was developed, and the Project includes several green features which will improve water runoff and stormwater management.

- E. Any special regulations for the use as may be provided by this Bylaw are fulfilled.

Any special regulations for the use shall be fulfilled if applicable.

- F. The requested use will not impair the integrity or character of the district or adjoining districts, nor be detrimental to the health or welfare.

The requested use will not impair the integrity or character of the district or adjoining districts, nor be detrimental to the health or welfare. The surrounding uses are made up of residential, commercial, and mixed-use properties. The proposed Project will strengthen and enhance the streetscape which is desirable within the Mass Ave corridor. There is precedent for the proposed uses in the area and the Project has been designed to fit within the neighborhood context. A fourth floor is being proposed and complies with the required pullback to limit any impact on abutters or the surrounding area. Additionally, based on the dramatic change in topography from the opposite side of Mass Ave, the final height of the structure will be comparable to many of the structures across the street and some of the newer developments along Mass Ave.

- G. The requested use will not, by its addition to the neighborhood, cause an excess of the use that could be detrimental to the character of said neighborhood.

The requested uses will not cause an excess of the use that could be detrimental to character of the neighborhood. The neighborhood currently contains a mixture of various residential uses and commercial uses. Mass Ave, due to its nature as an active corridor is designed to accommodate such uses and promotes such mixed-use developments. The additional of new housing units should have a favorable impact on the community and will provide housing opportunities for families and young professionals. The commercial use will bring street activity to the property and enhance the streetscape.

Overall, the proposed uses all meet the above defined criteria and the beneficial impacts outweigh any adverse effects.

Environmental Design Review Standards under Section 3.4.4:

- A. Preservation of Landscape

The existing landscape will be preserved wherever possible and the project includes a full landscape plan completed by Verdant Landscape Architecture, which should enhance the site's landscaping as a whole. Trees that need to be removed to accommodate the proposed building will be replaced with trees of a similar nature and measures will be taken to ensure their long-term health. A full planting schedule has been provided within the landscape plan. There is not a significant slope on the property and grade changes should be minimal, and where applicable will not be perceptible from Mass Ave and will keep in general appearance of neighboring developed areas.

B. Relation of Building to Environment

The new mixed-use building and site improvements are well suited for this neighborhood. The materials have been carefully selected to fit within the current context of the Mass Ave corridor and the building has been designed with recessed decks and alternating materials to break up the massing of the building. The proposed fourth floor has been setback and is comparable in finished height to some of the newer developments along Mass Ave as well as properties across the street that are elevated based upon the natural topography. Landscaping features provide natural beauty, an inviting streetscape, and buffering from abutting properties.

C. Open Space

Open space is being provided in the form of landscaped areas and private decks. A landscape buffer occurs at the rear of the building. Each unit contains a private deck. Street trees are also prepared as part of the Project. This will enhance the overall environmental friendliness of the building and provide a more enjoyable streetscape.

D. Circulation

Pedestrian and resident circulation is focused on two separate and distinct front entries, one for the residential portion of the building and one for the commercial space. Design elements are being incorporated to draw attention to these entries and provide visual cues for these separate uses. Public bike racks are being provided. The fifteen parking spaces and long-term bike racks will be accessed through one singular garage entry. From the garage, residents can access the main lobby and the rear yard.

E. Surface Water Drainage

Please see attached drainage plan completed by Spruhan Engineering, P.C.

F. Utility Services

Electrical, telephone, cable TV and other such lines shall remain above ground as they currently are and is typical in the area. Sanitary sewage disposal and solid waste disposal from the building will be in accordance with all codes and local requirements.

G. Advertising Features

Any signage and advertising will comply with the provisions of Section 6.2 of the Zoning By-Law. The size and location of any signs for the residential or commercial use will be completed with the intent of identifying the uses in a tasteful manner and will not detract from the character of the neighborhood or the surrounding properties.

H. Special Features

There are no proposed exposed storage areas, machinery installations, loading area, etc. The sprinkler room will also be enclosed and screened.

I. Safety

The project has been designed to facilitate building evacuation and maximize accessibility by fire, police and other emergency personnel and equipment. The building is located in close proximity to the sidewalk and Mass Ave allowing direct access for fire trucks. The building contains an elevator and two stairwells to provide multiple forms of convenient ingress and egress. Building features and the mixture of permanent residents and day-time occupancy at the commercial space will enliven the property and bring activity and additional safety and security to the site.

J. Heritage

The removal or disruption of historical structures or uses should be minimized within Arlington and its history should be respected and preserved where possible. This project involves razing two residential structures although it is not believed either of them have significant historical value and one of the structures is already in a state of disrepair. The proposed uses are in line with historic uses along the Mass Ave corridor and include both commercial and residential components.

K. Microclimate

The proposed project seeks to minimize adverse impacts on light, air, and water resources and on noise and temperature levels of the immediate environment. The proposed uses are non-intrusive, as residential and commercial uses are part of Arlington's long-term goals for Mass Ave and historically residential units and a small commercial space do not drastically alter the noise or temperature levels of the area. The building has been designed with a recessed fourth-story in line with

guidelines within the Arlington Zoning Bylaw, which limits impact on light and air. The project includes a number of environmentally friendly features, such as open space, landscaping, solar ready roof, EV charging stations and energy efficient appliances which promote mixed-use development in a responsible manner

L. Sustainable Building and Site Design

The proposed project will incorporate many features relating to sustainability, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality. A LEED checklist has been prepared and made part of this application package. The project current contains the following:

- Compliance with the Stretch Energy Code
- Sustainable building materials
- Energy efficient appliance and mechanical systems
- Energy efficient lighting
- Solar ready roof
- Light colored roofing system
- Sustainable landscaping plantings
- Non-invasive plant materials
- Stormwater management
- EV charging stations

Conclusion:

The Applicant believes the project provides an opportunity to redevelop these lots and substantially enliven this corridor, while promoting economic growth and necessary uses that will benefit the community. The requested uses will promote activity and commerce in the area while being designed to fit in with the neighborhood context.

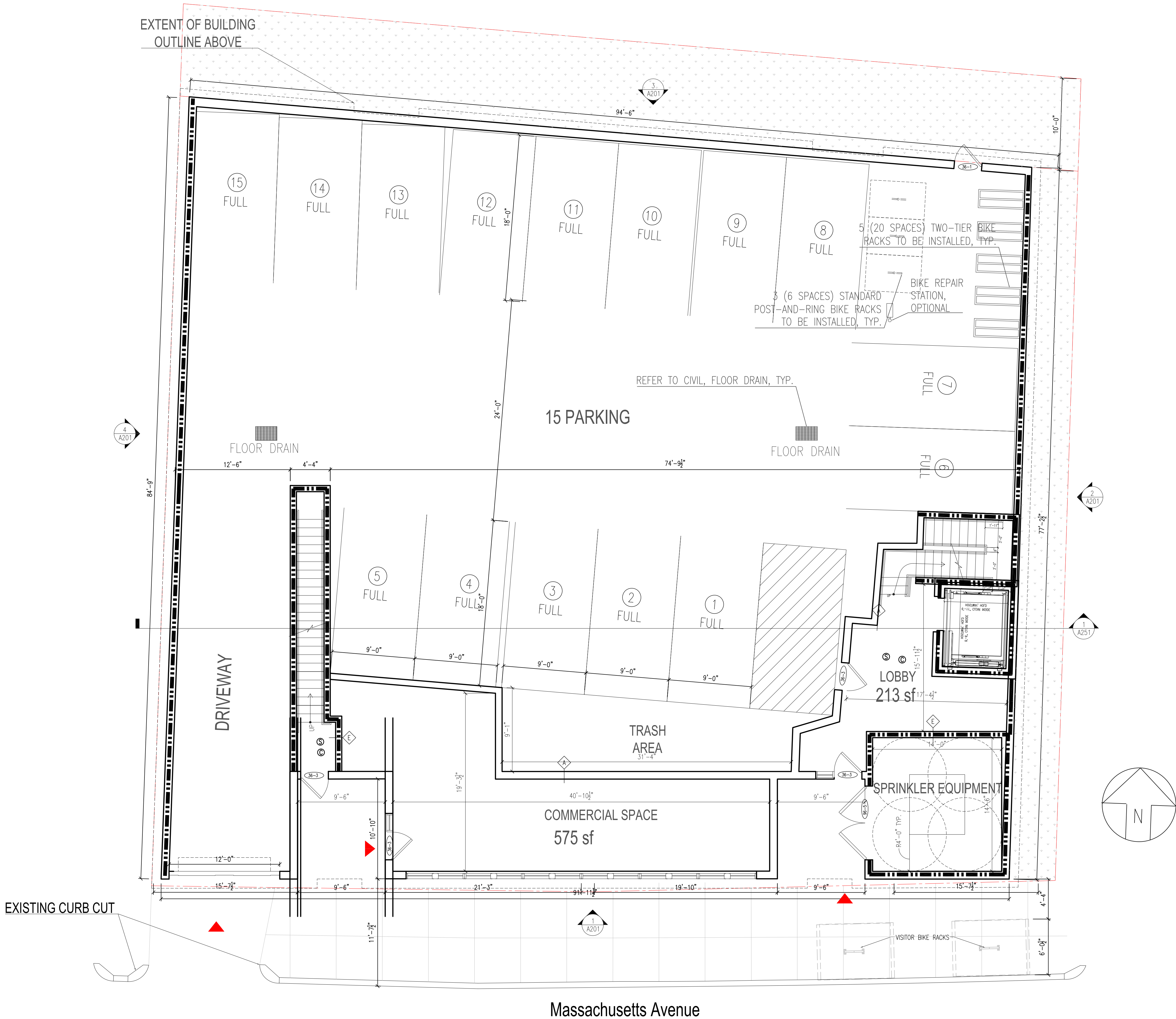
For the reasons stated the Applicant respectfully requests the Arlington Redevelopment Board grant the requested approvals relating to the proposed redevelopment and use of the property.

Respectfully submitted,
IG Investments LLC


By: Matthew J. Eckel, Esquire
Fletcher Tilton PC
100 Front Street
Worcester, MA 01608
Tel: (508) 459-8397
Email meckel@fletchertilton.com

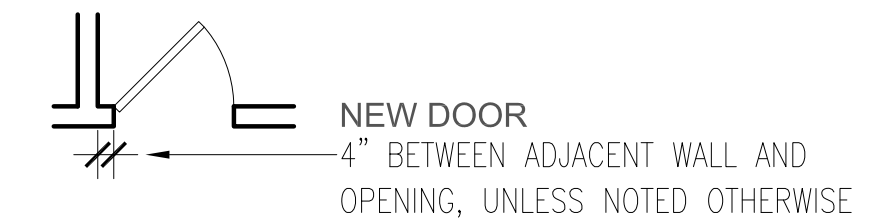
EXISTING CONDITIONS (VIEWS FROM MASS AVE)





LEGEND

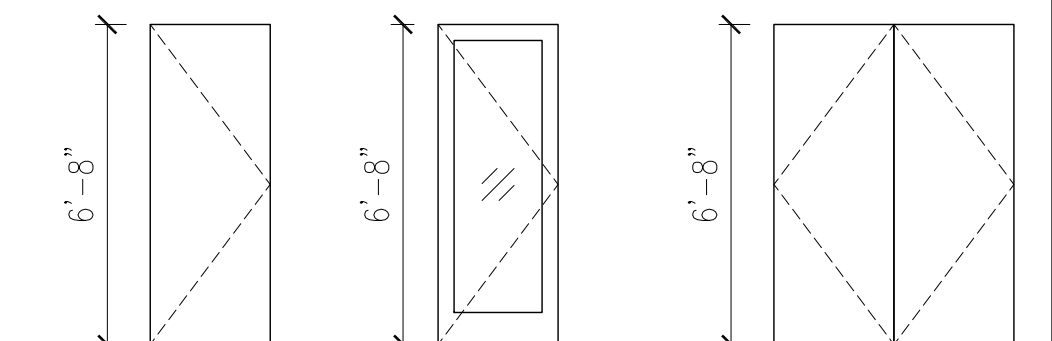
	NEW PARTITION
	PARTITION RATING 1/2 HOUR RATED PARTITION
	1 HOUR RATED PARTITION
	2 HOUR RATED PARTITION



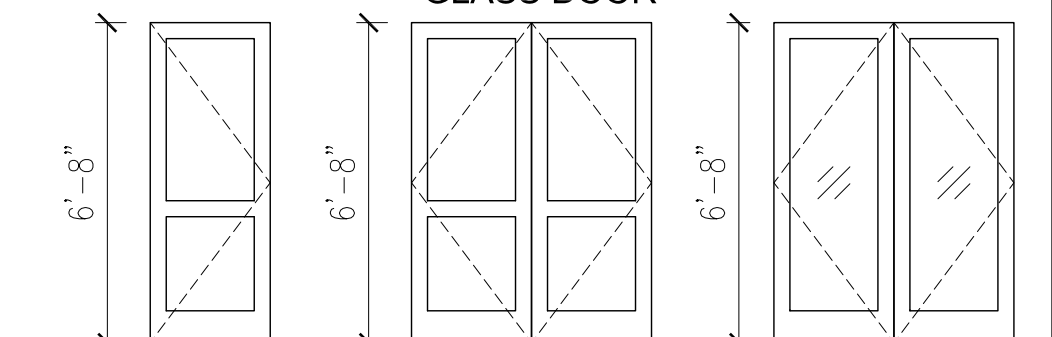
- ⑤ SMOKE DETECTOR, HARDWIRED AND INTERCONNECTED
- ⑥ CARBON MONOXIDE DETECTOR, HARDWIRED AND INTERCONNECTED
- ⑦ HEAT DETECTOR, HARDWIRED AND INTERCONNECTED

DOOR SCHEDULE

- ALL NEW DOORS TO BE 6'-8" HIGH, 1 3/4" THICK SOLID CORE WOOD DOORS WITH WOOD FRAMES UNLESS NOTED OTHERWISE.
- INTERIOR DOORS ARE TO BE PAINTED WHITE, CONFIRM EXTERIOR DOOR COLOR AND FINISH WITH OWNER AND ARCHITECT
- DOOR TYPES:



DOOR TYPE 1: SINGLE DOOR
DOOR TYPE 3: SINGLE FULL GLASS DOOR
DOOR TYPE 5: DOUBLE ENTRY DOOR



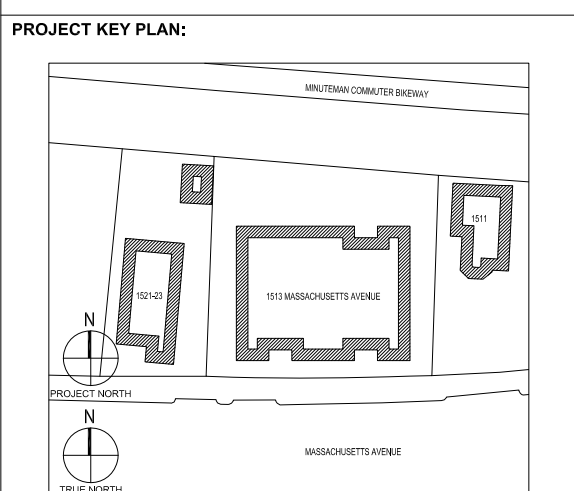
DOOR TYPE 2: TWO-PANEL DOOR
DOOR TYPE 4: DOUBLE TWO-PANEL DOOR
DOOR TYPE 6: DOUBLE FULL GLASS DOOR

1513-1519 MASSACHUSETTS AVE
Arlington, MA 02476
RISE REALTY
226 Harvard St, Brookline, MA, 02446
(617) 383-5659

ARCHITECT:
context
a collaborative design workshop
200 Portland Street, Boston, MA, 02114
(312) 780-9456

SHEET NOTES

- REFER TO SHEET A701 FOR TYP. WALL ASSEMBLIES
- REFER TO SHEET A702 FOR TYP. FLOOR, ROOF, & CEILING ASSEMBLIES
- ALL NEW INTERIOR PARTITIONS TO BE TYPE A UNLESS NOTED OTHERWISE
- ALL NEW BATHROOM TUBS TO BE 30"X60", AND SHOWERS 36"X60" UNLESS NOTED OTHERWISE
- COORD. WITH OWNER AND ARCHITECT ON FINISH MATERIALS



SEAL:

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LEVEL 1 PLAN

PROJECT NO.: 0680 SHEET NO.:
DATE: 07-29-2025
SCALE: AS INDICATED
A102

EXTENT OF BUILDING
OUTLINE ABOVE

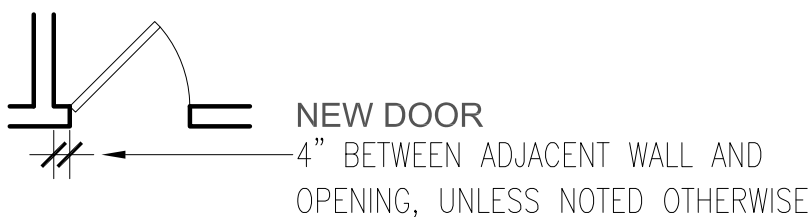


Massachusetts Avenue

Net SF per Level: 6653 sf
Net SF incl. Decks: 7163 sf
Net SF of Building: 19419 sf

LEGEND

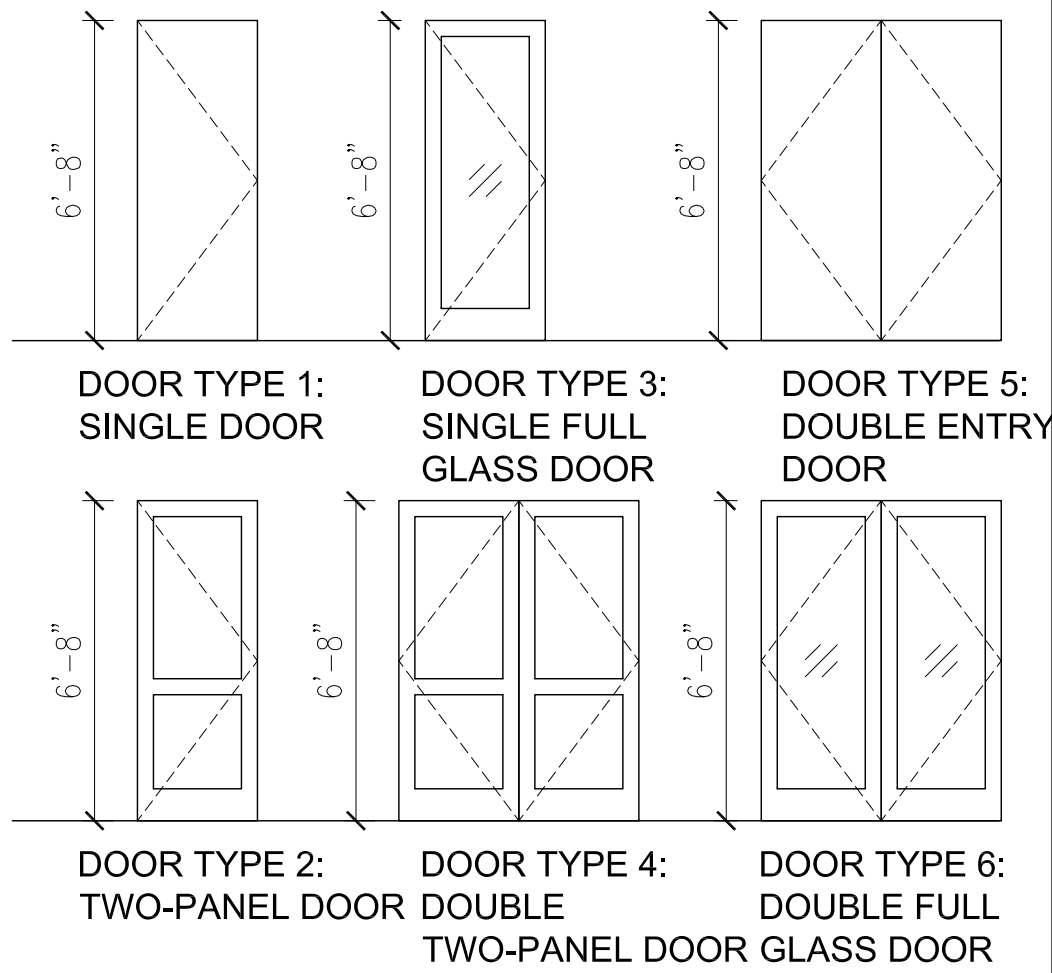
- NEW PARTITION
- 1/2 HR PARTITION RATING
- 1/2 HOUR RATED PARTITION
- 1 HOUR RATED PARTITION
- 2 HOUR RATED PARTITION



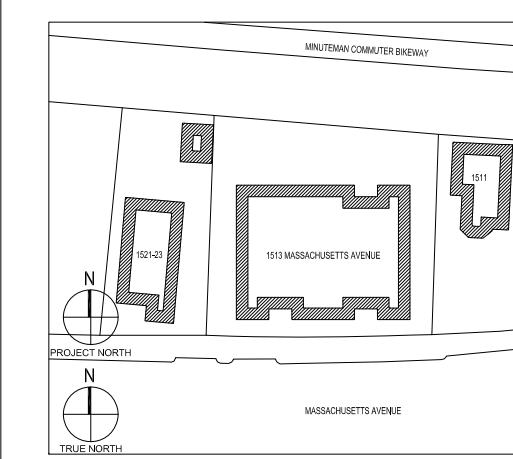
- SMOKE DETECTOR, HARDWIRED AND INTERCONNECTED
- CARBON MONOXIDE DETECTOR, HARDWIRED AND INTERCONNECTED
- HEAT DETECTOR, HARDWIRED AND INTERCONNECTED

DOOR SCHEDULE

- ALL NEW DOORS TO BE 6'-8" HIGH, 1 3/4" THICK SOLID CORE WOOD DOORS WITH WOOD FRAMES UNLESS NOTED OTHERWISE.
- INTERIOR DOORS ARE TO BE PAINTED WHITE, CONFIRM EXTERIOR DOOR COLOR AND FINISH WITH OWNER AND ARCHITECT
- DOOR TYPES:



PROJECT KEY PLAN:



SEAL:

DRAWN BY: NAC

CHECKED BY: EZ

00 07-29-2025

ISSUED FOR PERMIT

LEVEL 2 PLAN

PROJECT NO. 0680

DATE: 07-29-2025

SCALE: AS INDICATED

SHEET NO.

A103

1513-1519 MASSACHUSETTS AVE

Arlington, MA 02476

RISE REALTY

226 Harvard St, Brookline, MA, 02446

(617) 383-5659

ARCHITECT:

context

a collaborative design workshop

200 Portland Street, Boston, MA, 02114

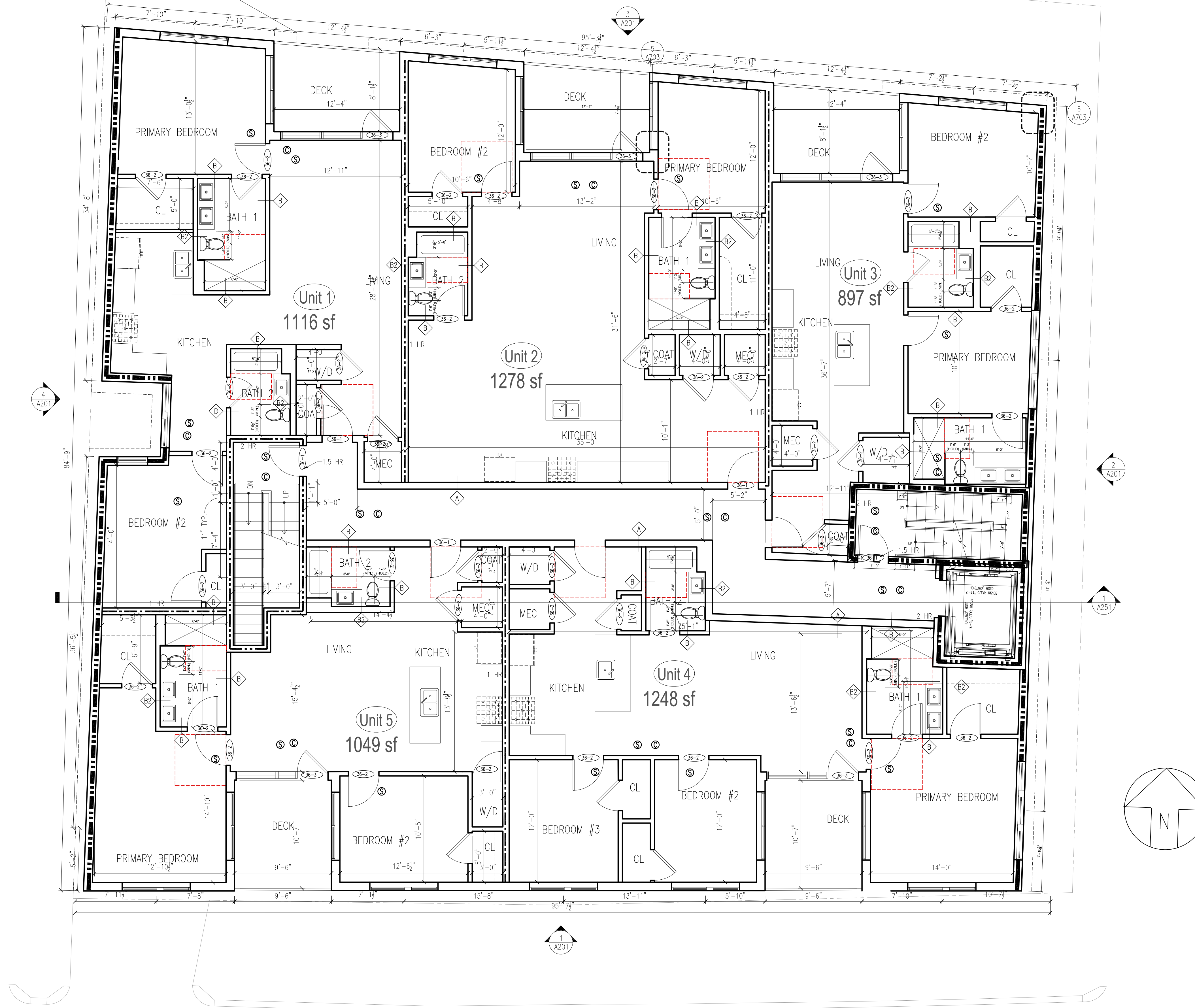
(312) 780-9456

SHEET NOTES

- REFER TO SHEET A701 FOR TYP. WALL ASSEMBLIES
- REFER TO SHEET A702 FOR TYP. FLOOR, ROOF, & CEILING ASSEMBLIES
- ALL NEW INTERIOR PARTITIONS TO BE TYPE A UNLESS NOTED OTHERWISE
- ALL NEW BATHROOM TUBS TO BE 30"X60", AND SHOWERS 36"X60" UNLESS NOTED OTHERWISE
- COORD. WITH OWNER AND ARCHITECT ON FINISH MATERIALS
- FOR ACCESSIBILITY:
- ALL UNITS TO BE GROUP 1
- DASHED RED CIRCLE INDICATES 5' TURNING RADIUS
- DASHED RED RECTANGLE INDICATES ADA CLEAR SPACE

1 LEVEL 2
SCALE: 3/16" = 1'-0"

EXTENT OF BUILDING
OUTLINE ABOVE



Massachusetts Avenue

Net SF per Level: 6488 sf
Net SF incl. Decks: 6988 sf
Net SF of Building: 19803 sf

1 LEVEL 3 PLAN
SCALE: 3/16" = 1'-0"

1513-1519 MASSACHUSETTS
AVE
Arlington, MA 02476
RISE REALTY
226 Harvard St, Brookline, MA, 02146
(617) 383-5659

ARCHITECT:

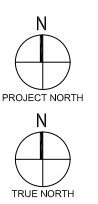
context
a collaborative design workshop

200 Portland Street, Boston, MA, 02114
(312) 780-9456

SHEET NOTES

1. REFER TO SHEET A701 FOR TYP. WALL ASSEMBLIES
2. REFER TO SHEET A702 FOR TYP. FLOOR, ROOF, & CEILING ASSEMBLIES
3. ALL NEW INTERIOR PARTITIONS TO BE TYPE A UNLESS NOTED OTHERWISE
4. ALL NEW BATHROOM TUBS TO BE 30"X60", AND SHOWERS 36"X60" UNLESS NOTED OTHERWISE
5. COORD. WITH OWNER AND ARCHITECT ON FINISH MATERIALS

PROJECT KEY PLAN:



SEAL:

DRAWN BY: NAC

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LEVEL 3 PLAN

PROJECT
No.: 0680
DATE: 07-29-2025
SCALE: AS INDICATED

SHEET
No.: **A104**



Massachusetts Avenue

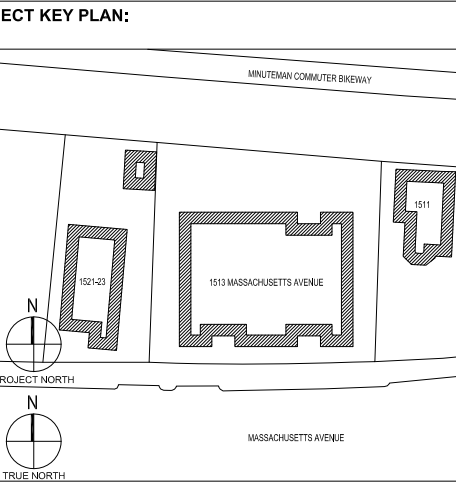
Net SF Level 4: 6039 sf
Net SF incl. Decks: 6744 sf
Net SF of Building: 19803 sf

1 LEVEL 4
SCALE: 3/16" = 1'-0"

1513-1519 MASSACHUSETTS
AVE
Arlington, MA 02476
RISE REALTY
226 Harvard St, Brookline, MA, 02446
(617) 383-5659

ARCHITECT:
context
a collaborative design workshop
200 Portland Street, Boston, MA, 02114
(312) 780-9456

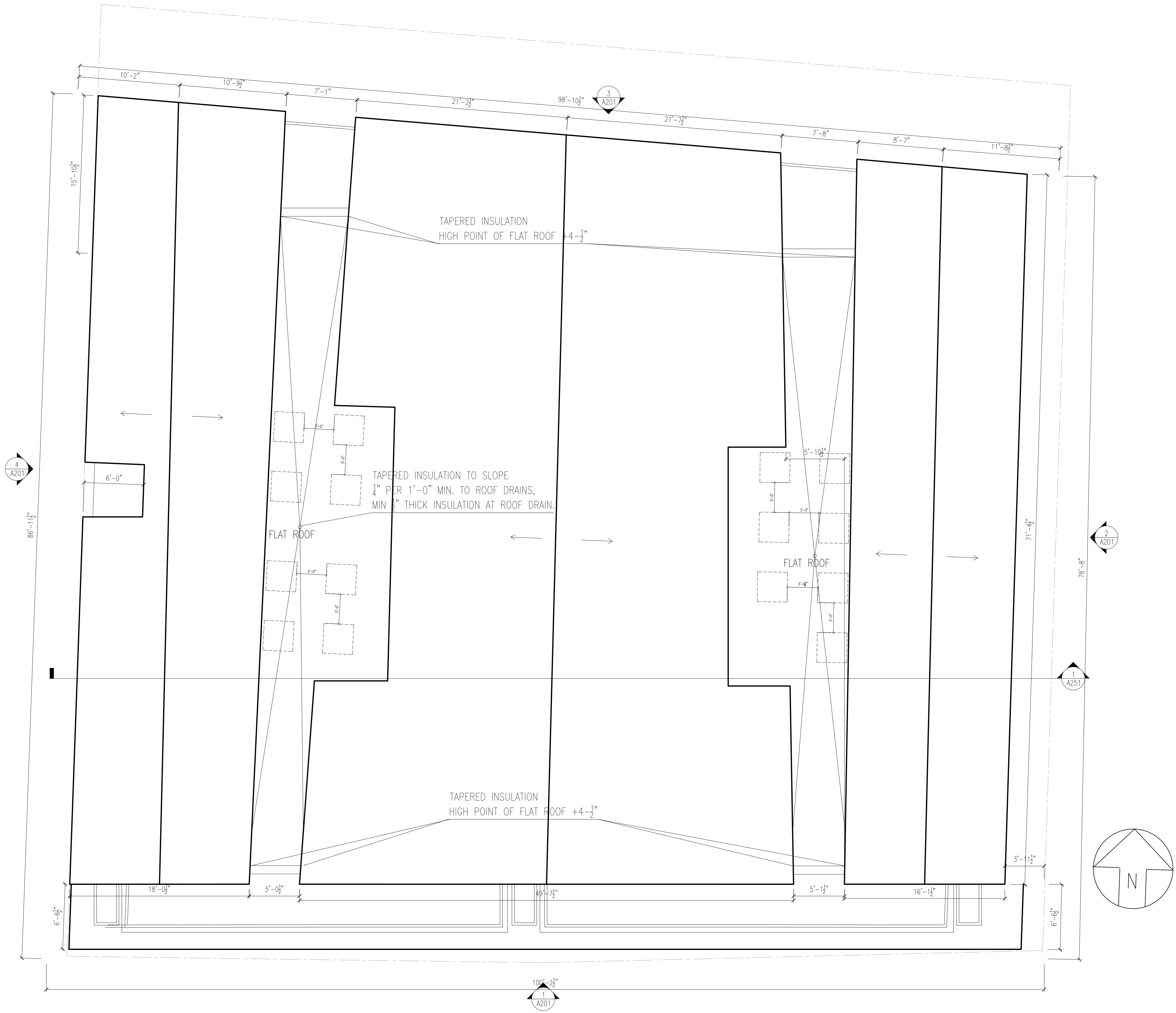
- SHEET NOTES**
1. REFER TO SHEET A701 FOR TYP. WALL ASSEMBLIES
 2. REFER TO SHEET A702 FOR TYP. FLOOR, ROOF, & CEILING ASSEMBLIES
 3. ALL NEW INTERIOR PARTITIONS TO BE TYPE A UNLESS NOTED OTHERWISE
 4. ALL NEW BATHROOM TUBS TO BE 30"X60", AND SHOWERS 36"X60" UNLESS NOTED OTHERWISE
 5. COORD. WITH OWNER AND ARCHITECT ON FINISH MATERIALS



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LEVEL 4 PLAN	
PROJECT NO.: 0680	SHEET NO.: A105
DATE: 07-29-2025	
SCALE: AS INDICATED	



Massachusetts Avenue

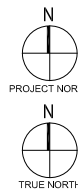
1 ROOF PLAN
SCALE: 3/16" = 1'-0"

1513-1519 MASSACHUSETTS AVE
Arlington, MA 02476
RISE REALTY
226 Harvard St, Brookline, MA, 02446
(617) 383-5659

ARCHITECT:
context
a collaborative design workshop
200 Portland Street, Boston, MA, 02114
(312) 780-9456

- SHEET NOTES**
1. REFER TO SHEET A701 FOR TYP. WALL ASSEMBLIES
 2. REFER TO SHEET A702 FOR TYP. FLOOR, ROOF, & CEILING ASSEMBLIES
 3. ALL NEW INTERIOR PARTITIONS TO BE TYPE A UNLESS NOTED OTHERWISE
 4. ALL NEW BATHROOM TUBS TO BE 30"X60", AND SHOWERS 36"X60" UNLESS NOTED OTHERWISE
 5. COORD. WITH OWNER AND ARCHITECT ON FINISH MATERIALS

PROJECT KEY PLAN:



SEAL:

DRAWN BY: NAC

CHECKED BY: EZ

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ROOF PLAN

PROJECT No.: 0680
DATE: 07-29-2025
SCALE: AS INDICATED

SHEET No.: **A106**

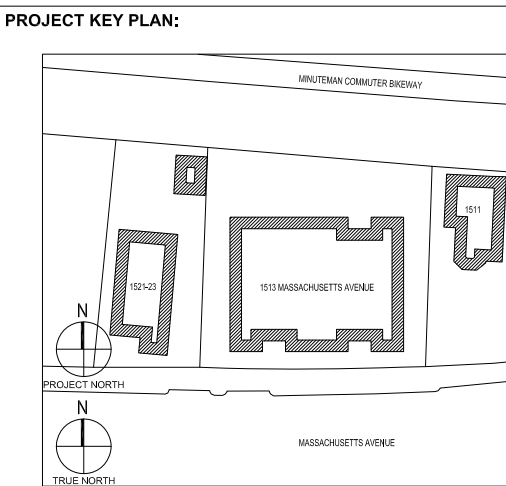


1 FRONT ELEVATION
SCALE: 1/4" = 1'-0"

1513-1519 MASSACHUSETTS AVE
Arlington, MA 02476
RISE REALTY
226 Harvard St, Brookline, MA, 02446
(617) 383-5659

ARCHITECT:
context
a collaborative design workshop
200 Portland Street, Boston, MA, 02114
(312) 780-9456

- SHEET NOTES**
1. ELEVATION MARKERS INDICATE ELEVATION AT TOP OF FINISHED FLOOR
 2. A.F.F = SILL ELEVATION AWAY FROM FINISHED FLOOR
 3. MATERIAL DIMENSIONS SUGGEST NOMINAL SIZE; REFER TO MANUFACTURER FOR EXACT DIMENSIONS



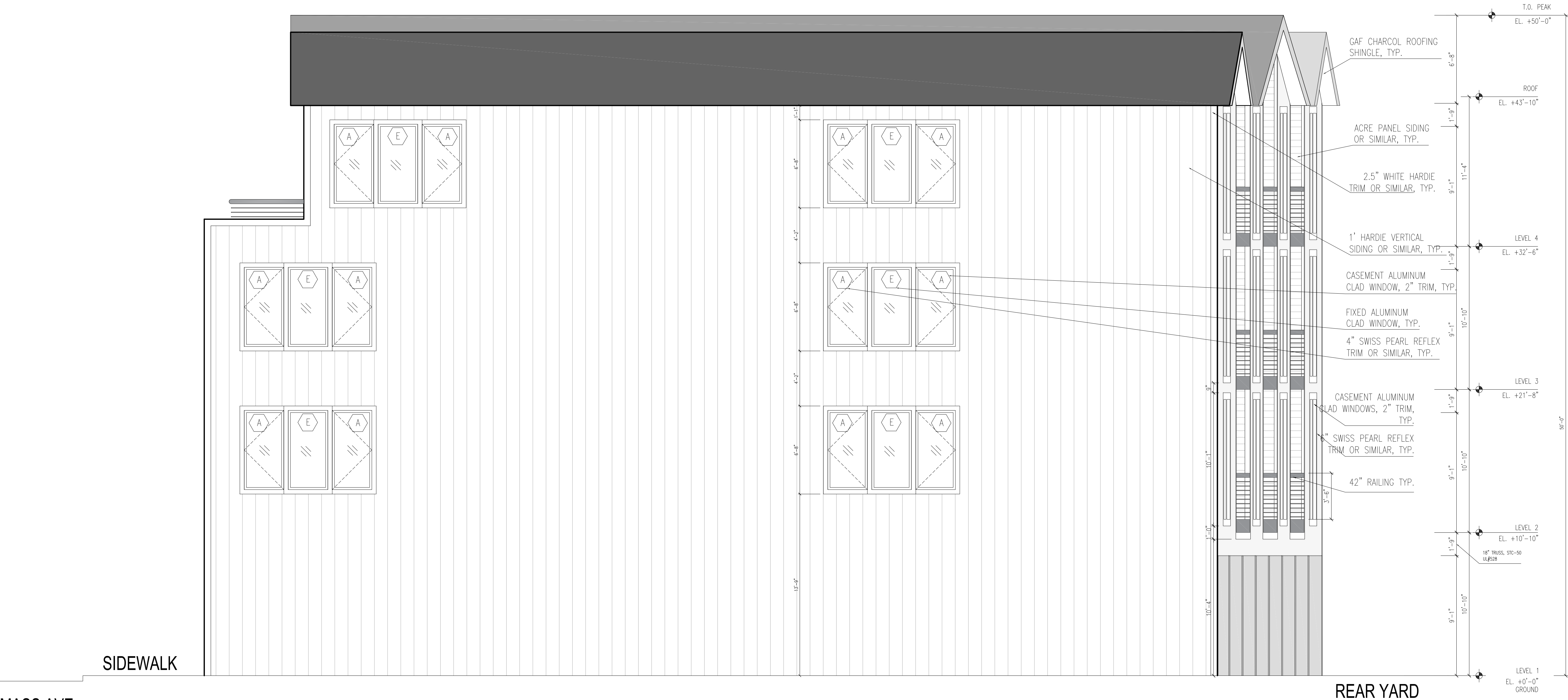
SEAL:

DRAWN BY: NAC	CHECKED BY: EZ
00	07-29-2025 ISSUED FOR PERMIT

BUILDING ELEVATION

PROJECT No.: 0680
DATE: 07-29-2025
SCALE: AS INDICATED
SHEET No.: **A203**

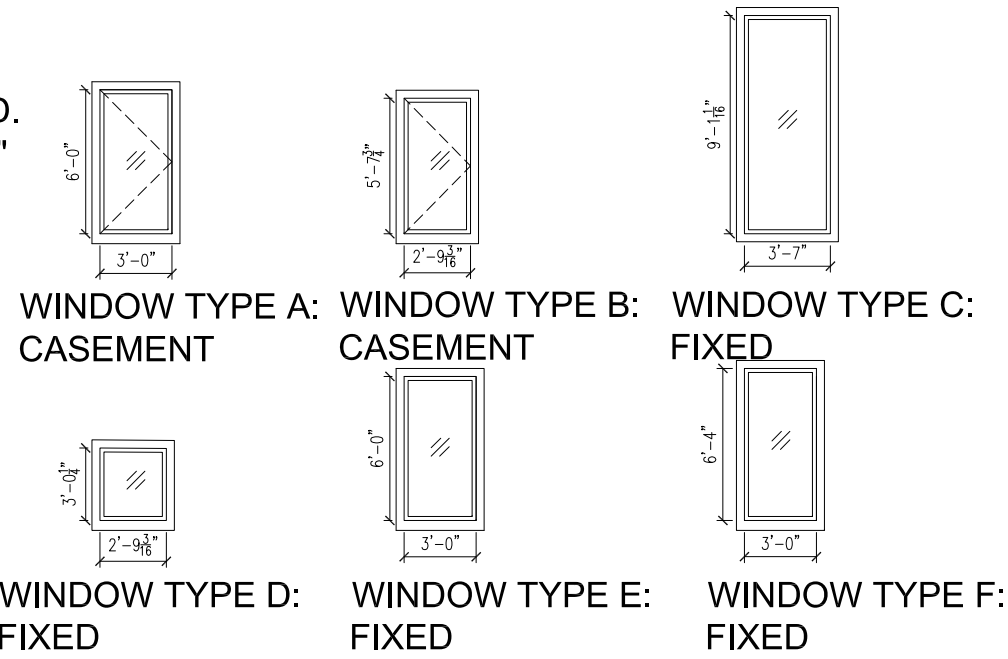
MASS AVE
SIDEWALK



1 SIDE ELEVATION
SCALE: 1/4" = 1'-0"

- WINDOW SCHEDULE**
- ALL WINDOWS TO HAVE 2" FRAME ALUMINUM CLAD.
 - FIXED WINDOWS ARE TO BE TEMPERED WITHIN 18" OF FLOOR, CONFIRM GLAZING COLOR AND CLADDING WITH OWNER AND ARCHITECT
 - WINDOW TYPES:

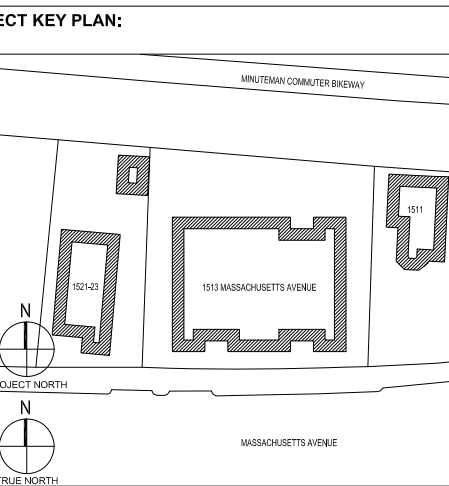
TRIM VARIES 2" TO 4";
SEE DETAIL ELEVATION FOR DIMENSION



1513-1519 MASSACHUSETTS AVE
Arlington, MA 02476
RISE REALTY
226 Harvard St, Brookline, MA, 02446
(617) 383-5659

ARCHITECT:
context
a collaborative design workshop
200 Portland Street, Boston, MA, 02114
(312) 780-9456

- SHEET NOTES**
- ELEVATION MARKERS INDICATE ELEVATION AT TOP OF FINISHED FLOOR
 - A.F.F = SILL ELEVATION AWAY FROM FINISHED FLOOR
 - MATERIAL DIMENSIONS SUGGEST NOMINAL SIZE; REFER TO MANUFACTURER FOR EXACT DIMENSIONS



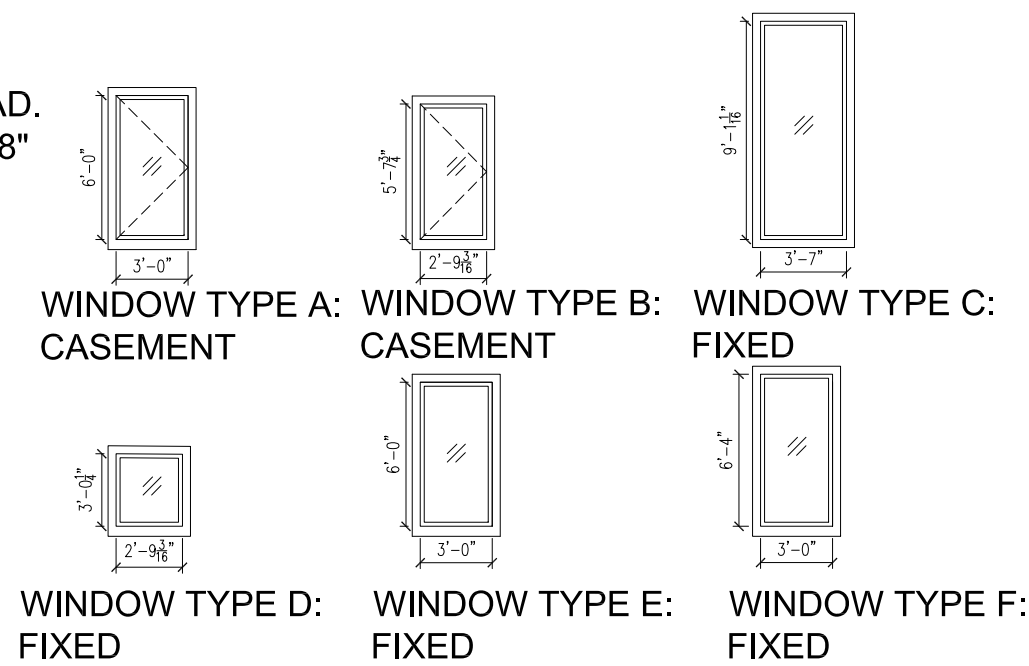
SEAL:	
DRAWN BY: NAC	CHECKED BY: EZ
00	07-29-2025 ISSUED FOR PERMIT

BUILDING ELEVATION

PROJECT No.: 0680 SHEET No.:
DATE: 07-29-2025
SCALE: AS INDICATED
A204

- WINDOW SCHEDULE**
1. ALL WINDOWS TO HAVE 2" FRAME ALUMINUM CLAD.
 2. FIXED WINDOWS ARE TO BE TEMPERED WITHIN 18" OF FLOOR, CONFIRM GLAZING COLOR AND CLADDING WITH OWNER AND ARCHITECT
 3. WINDOW TYPES:

TRIM VARIES 2" TO 4";
SEE DETAIL ELEVATION FOR DIMENSION

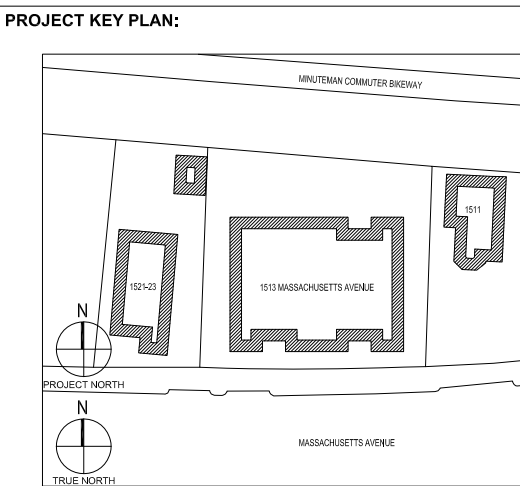


1 REAR ELEVATION
SCALE: 1/4" = 1'-0"

1513-1519 MASSACHUSETTS AVE
Arlington, MA 02476
RISE REALTY
226 Harvard St, Brookline, MA, 02446
(617) 383-5659

ARCHITECT:
context
a collaborative design workshop
200 Portland Street, Boston, MA, 02114
(312) 780-9456

- SHEET NOTES**
1. ELEVATION MARKERS INDICATE ELEVATION AT TOP OF FINISHED FLOOR
 2. A.F.F = SILL ELEVATION AWAY FROM FINISHED FLOOR
 3. MATERIAL DIMENSIONS SUGGEST NOMINAL SIZE; REFER TO MANUFACTURER FOR EXACT DIMENSIONS



SEAL:

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NAC	EZ
00	07-29-2025 ISSUED FOR PERMIT

BUILDING ELEVATION

PROJECT No.: 0680 SHEET No.:
DATE: 07-29-2025
SCALE: AS INDICATED

A203

1. ALL WINDOWS TO HAVE 2" FRAME ALUMINUM CLAD.
2. FIXED WINDOWS ARE TO BE TEMPERED WITHIN 18" OF FLOOR, CONFIRM GLAZING COLOR AND CLADDING WITH OWNER AND ARCHITECT
3. WINDOW TYPES:

AD.
18"

WINDOW TYPE A: CASEMENT

WINDOW TYPE B: CASEMENT

WINDOW TYPE C: FIXED

WINDOW TYPE D: FIXED

WINDOW TYPE E: FIXED

WINDOW TYPE F: FIXED

Arlington, MA 02476
RISE REALTY
 226 Harvard St, Brookline, MA, 02446
 (617) 383-5659

SHEET NOTES

- 2** SIDE ELEVATION
SCALE: 1/4" = 1'-0"

101 WINGACROFTS AVENUE

PROJECT NORTH

WINGACROFTS AVENUE

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00	07-29-2025	ISSUED FOR PERMIT

PROJECT No.: 0680	SHEET No.: A204
DATE: 07-29-2025	
SCALE: AS INDICATED	

A204



4' Ht. Open Picket Fence OR Similar



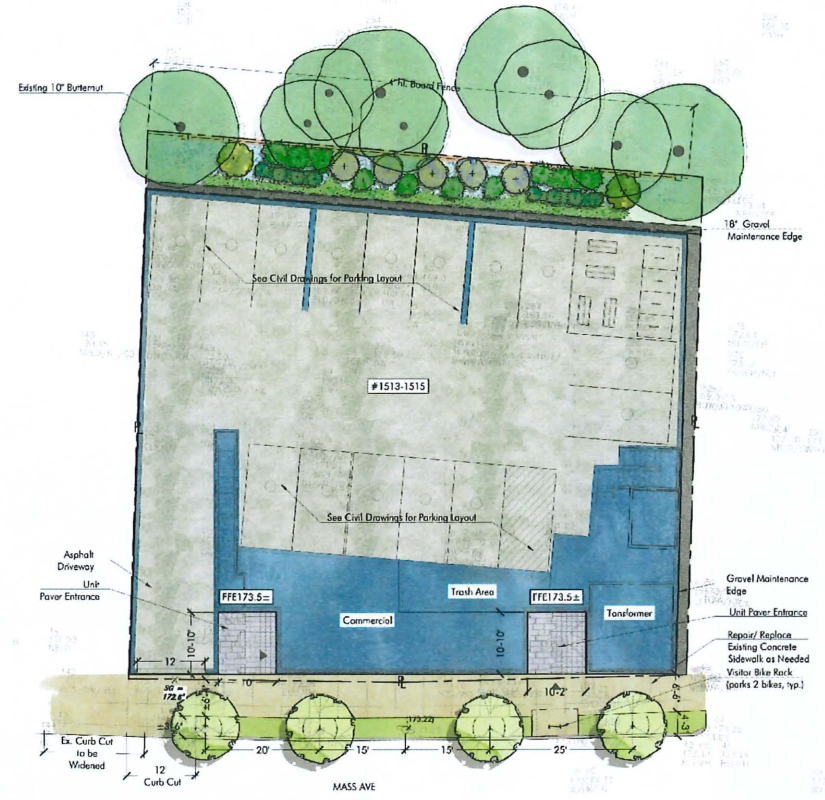
Visitor Bike Racks

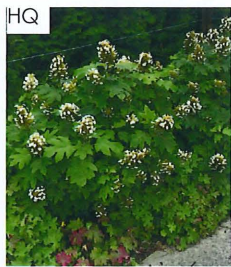


Unilock SERIES paver Glacier 8"x8" OR Similar



Unilock Beacon Hill paver Granite Fusion Large Rectangle OR Similar





PLANT LIST: PROBABLE | MASS AVE 1513-1515

KEY QTY LATIN NAME

TREES:

AL 4 Amelanchier laevis

SHRUBS:

FG 2 Fothergilla gardenii

HQ 5 Hydrangea quercifolia

IG 8 Ilex glabra

TM 10 Taxus x media 'Hicksii'

PERENNIALS & GRASSES:

cp 31 Carex pensylvanica

COMMON NAME

Serviceberry

Fothergilla

Oak Leaf Hydrangea

Inkberry

Hicks Yew

Pennsylvania Sedge

SIZE

2' col.

24" ht.

5 gal.

3 gal.

5 gal.

1 gal.

NOTES

B&B

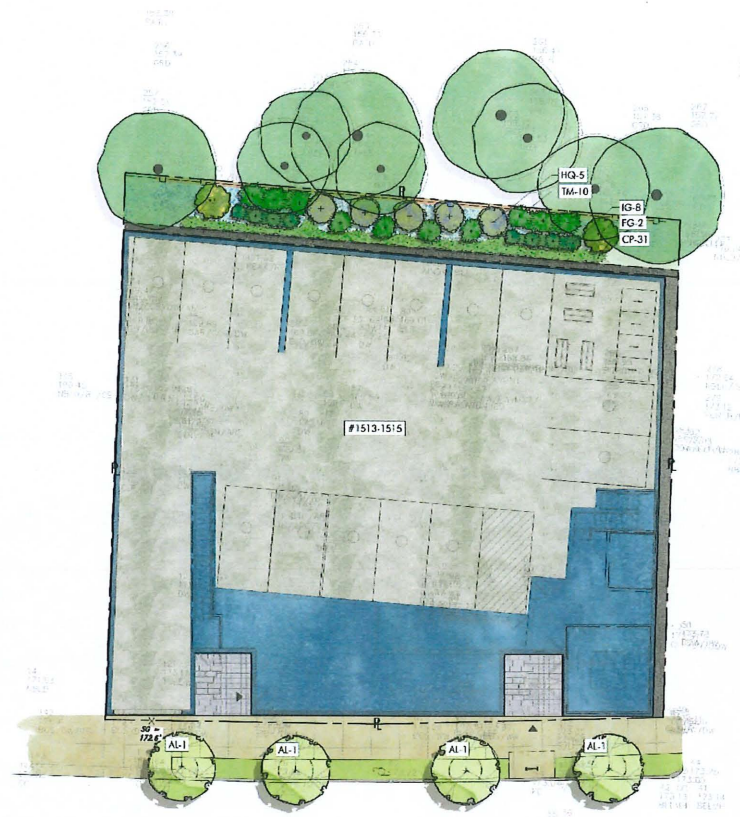
Pots

Pots

Pots

Pots

Pots





LEED v4 for BD+C: New Construction and Major Renovation

Project Checklist

Project Name: 1517-1519 Mass Ave Arlington MA

Date: 18-Aug-25

Y ? N

1			Credit	Integrative Process	1
---	--	--	--------	---------------------	---

8	2	6	Location and Transportation			16
			Credit	LEED for Neighborhood Development Location		16
1			Credit	Sensitive Land Protection		1
		2	Credit	High Priority Site		2
5			Credit	Surrounding Density and Diverse Uses		5
	1	4	Credit	Access to Quality Transit		5
1			Credit	Bicycle Facilities		1
1			Credit	Reduced Parking Footprint		1
	1		Credit	Green Vehicles		1

7	0	3	Sustainable Sites			10
Y			Prereq	Construction Activity Pollution Prevention		Required
1			Credit	Site Assessment		1
		2	Credit	Site Development - Protect or Restore Habitat		2
		1	Credit	Open Space		1
3			Credit	Rainwater Management		3
2			Credit	Heat Island Reduction		2
1			Credit	Light Pollution Reduction		1

5	0	6	Water Efficiency			11
Y			Prereq	Outdoor Water Use Reduction		Required
Y			Prereq	Indoor Water Use Reduction		Required
Y			Prereq	Building-Level Water Metering		Required
1		1	Credit	Outdoor Water Use Reduction		2
4		2	Credit	Indoor Water Use Reduction		6
		2	Credit	Cooling Tower Water Use		2
		1	Credit	Water Metering		1

14	1	20	Energy and Atmosphere			33
Y			Prereq	Fundamental Commissioning and Verification		Required
Y			Prereq	Minimum Energy Performance		Required
Y			Prereq	Building-Level Energy Metering		Required
Y			Prereq	Fundamental Refrigerant Management		Required
		6	Credit	Enhanced Commissioning		6
12	1	7	Credit	Optimize Energy Performance		18
		1	Credit	Advanced Energy Metering		1
		2	Credit	Demand Response		2
2		1	Credit	Renewable Energy Production		3
		1	Credit	Enhanced Refrigerant Management		1
		2	Credit	Green Power and Carbon Offsets		2

1	2	10	Materials and Resources			13
Y			Prereq	Storage and Collection of Recyclables		Required
Y			Prereq	Construction and Demolition Waste Management Planning		Required
		5	Credit	Building Life-Cycle Impact Reduction		5
	1	1	Credit	Building Product Disclosure and Optimization - Environmental Product Declarations		2
		2	Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials		2
	1	1	Credit	Building Product Disclosure and Optimization - Material Ingredients		2
1		1	Credit	Construction and Demolition Waste Management		2

6	0	10	Indoor Environmental Quality			16
Y			Prereq	Minimum Indoor Air Quality Performance		Required
Y			Prereq	Environmental Tobacco Smoke Control		Required
1		1	Credit	Enhanced Indoor Air Quality Strategies		2
2		1	Credit	Low-Emitting Materials		3
1			Credit	Construction Indoor Air Quality Management Plan		1
		2	Credit	Indoor Air Quality Assessment		2
1			Credit	Thermal Comfort		1
1		1	Credit	Interior Lighting		2
		3	Credit	Daylight		3
		1	Credit	Quality Views		1
		1	Credit	Acoustic Performance		1

4	0	2	Innovation			6
3		2	Credit	Innovation-Sustainable Purchasing Lamps, Thermal Comfort Survey, Tenant Manual,		5
1			Credit	LEED Accredited Professional		1

4	0	0	Regional Priority			4
1			Credit	Regional Priority: Indoor Water Use		1
1			Credit	Regional Priority: Renewable Energy		1
1			Credit	Regional Priority: Optimize Energy		1
1			Credit	Regional Priority: Rainwater Management		1

50	5	57	TOTALS			Possible Points:	110
Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80 to 110							

1517-1519 Mass Ave
Arlington, MA

Green Building Submission
for LEED V4 Certifiability
August 18, 2025

Prepared by:
Soden Sustainability



Sustainability/Green Building Design Approach

To meet the sustainability requirements for new construction in the Town of Arlington, MA, the following section outlines how the Project complies with the LEED Building Design & Construction v4 criteria.

The Project will demonstrate compliance with the LEED Certifiably Requirements. Further study over the coming weeks and months will determine and confirm final credit achievement. At this stage in the project, we are tracking 50 YES credits and 5 MAYBE YES credits (LEED Silver).

Sustainability informs every design decision. Enduring and efficient buildings conserve embodied energy and preserve natural resources. The Project embraces the opportunity to positively influence the urban environment. Its urban location takes advantage of existing infrastructure while access to public transit will reduce dependence on single-occupancy vehicle trips and minimize transportation impacts.

The LEED v4 for Building Design and Construction (BD&C) rating system tracks the sustainable features of a Project by achieving points in following categories: Integrative Process; Location & Transportation; Sustainable Sites; Water Efficiency; Energy and Atmosphere; Materials and Resources; Indoor Environmental Quality; and Innovation and Design Process.

Integrative Process

The Proponent and Project team are committed to an integrated design approach using early modeling and extensive design team coordination to achieve synergies across disciplines and building systems.

Location and Transportation

The Location and Transportation credit category encourages development on previously developed land, minimizing a building's impact on ecosystems and waterways, regionally appropriate landscaping, and smart transportation choice.

The Project site has been previously developed, meeting the criteria for sensitive land protection credit.

The project has access to the C, 62, and 62/76 bus routes within a quarter-mile walking distance. We are just below the threshold for earning 1 point; since an additional route is only planned for the future, we are counting this as a "maybe" at this time.

The parking for the project is reduced by more than 30% from the LEED parking baseline earning the Reduced Parking Footprint Credit. The project will also provide secure bike racks for the residents.

Sustainable Sites

The development of sustainable sites is at the core of sustainable design. Sustainable Site design provides quality open space with active landscape elements that can both mitigate stormwater and provide shade and thermal comfort for the building occupants.

As required by LEED, the Project will create and implement an erosion and sedimentation control plan for all construction activities associated with the Project. The plan will conform to the erosion and sedimentation requirements of the 2012 U.S. Environmental Protection Agency (EPA) Construction General Permit (CGP) or local equivalent, whichever is more stringent.

For the site assessment credit, the Project will demonstrate the relationships between the Project site features and topics, Topography, Hydrology, Climate, Vegetation, Soils, Human use.

The Project will incorporate Low Impact Development (LID) Strategies to promote infiltration for comprehensive stormwater management. The Project will meet requirements to earn 3 points for the Rainwater Management credit, as it has been designed to manage and retain a 90th percentile storm on site.

The building roof and all hardscape material will comply with the SRI standards set forth by LEED, thus achieving both Heat Island credits. All exterior lighting fixtures will comply with the Light Pollution Reduction credit and will be BUG rated.

Water Efficiency

Buildings are major users of our potable water supply and conservation of water preserves a natural re-source while reducing the amount of energy and chemicals used for sewage treatment. The goal of the Water Efficiency credit category is to encourage smarter use of water, both inside and outside.

Water reduction is typically achieved through more efficient appliances, fixtures and fittings inside and water-wise landscaping outside. To satisfy the requirements of the Indoor Water Use Reduction Prerequisite and credit, the Project will incorporate water conservation strategies that include low flow plumbing fixtures for water closets and faucets.

To satisfy the requirements of the Outdoor Water Use Reduction Prerequisite and credit, the landscape will be designed to use 50% less potable water for irrigation, and the design will only have plant material that is native and adaptive.

The Project is targeting significant indoor water use reduction from the baseline. All newly installed toilets, lavatory faucets, kitchen sinks and showerheads that are eligible for labeling will have the Water Sense label and will be low-flow. The project is currently tracking a 40% reduction in potable water use for plumbing fixtures.

Energy & Atmosphere

According to the U.S. Department of Energy, buildings use 39 percent of the energy and 74 percent of the electricity produced each year in the United States. The Energy and Atmosphere credit category encourages a wide variety of energy strategies: commissioning; energy use monitoring; efficient design and construction; efficient appliances, systems and lighting; the use of renewable and clean sources of energy, generated on-site or off-site; and other innovative practices.

Fundamental Commissioning will be pursued for the Project. Also, a whole-building energy simulation will be performed for the Project. Through the use of a high-performing envelope, highly efficient all-electric HVAC systems, and on-site solar, we anticipate achieving approximately 12 LEED points.

As required by LEED, the Project will not use chlorofluorocarbon (CFC)-based refrigerants in new heating, ventilating, air-conditioning, and refrigeration (HVAC&R) systems. The Project will target the use of refrigerants used in heating, ventilating, air-conditioning, and refrigeration (HVAC&R) equipment that minimize or eliminate the emission of compounds that contribute to ozone depletion and climate change.

Materials & Resources

During both construction and operations, buildings generate tremendous waste and use many materials and resources. The Materials & Resources credit category encourages the selection of sustainable materials, including those that are harvested and manufactured locally, contain high-recycled content, and are rapidly renewable. It also promotes the reduction of waste through building and material reuse, construction waste management, and ongoing recycling programs.

As required by LEED, the Project will provide dedicated areas accessible to waste haulers and building occupants for the collection and storage of recyclable materials for the entire building. Collection and storage areas may be separate locations. Recyclable materials will include mixed paper, corrugated cardboard, glass, plastics, and metals. The Project will also take appropriate measures for the safe collection, storage, and disposal of two of the following: batteries, mercury-containing lamps, and electronic waste.

To comply with both the prerequisite and credit requirements related to construction waste management, the Project will develop and implement a construction and demolition waste management plan that will identify at least five materials (both structural and nonstructural) targeted for diversion and approximate a percentage of the overall Project

waste that these materials represent. The Project will divert a minimum of 50 percent of the total construction and demolition material; the construction team will make a concerted effort to source separate diverted materials.

Careful material selection will be performed for the Project. The Project will evaluate products that have Environmental Product Declarations (EPDs), responsible sourcing methods, and Material Ingredients Disclosures to meet the LEED Criteria. The team is also evaluating an assessment of the project's embodied carbon.

Indoor Environmental Quality

The U.S. Environmental Protection Agency estimates that Americans spend about 90 percent of their day in-doors, where the air quality can be significantly worse than outside. The Indoor Environmental Quality credit category promotes strategies that can improve indoor air through low emitting materials selection and increased ventilation. It also promotes access to natural daylight and views.

As required by LEED, the Project will meet the minimum requirements of ASHRAE Standard 62.1–2010, Sections 4–7, Ventilation for Acceptable Indoor Air Quality (with errata), or a local equivalent, whichever is more stringent. Also, during building operations the Proponent will institute a No Smoking Policy to prohibit the use of all tobacco products inside the building and within 25 feet of the building entrance, air intakes, and operable windows.

The Project will provide entryway systems, interior cross-contamination prevention, and MERV 13 filtration, meeting the requirements for 1 point for the Enhanced Indoor Air Quality Strategies credit.

The Project will develop and implement an indoor air quality (IAQ) management plan for the construction and preoccupancy phases of the building, meeting or exceeding all applicable recommended control measures of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guidelines for Occupied Buildings under Construction, 2nd edition, 2007, ANSI/SMACNA 008–2008, Chapter 3. The Project will follow strict IAQ guidelines and protect absorptive materials stored on-site from moisture damage.

The project is anticipating a minimum of 2 points for the Low Emitting Materials Credit and will select appropriate low-VOC finishes to do so. Additionally, the Project will meet the thermal comfort criteria both for controllability and the ASHRAE 55 standards along with the interior lighting criteria for controllability.

Innovation and Design Process

The Innovation in Design and Innovation in Operations credit categories provide additional points for projects that use new and innovative technologies, achieve performance well beyond what is required by LEED credits, or utilize green building strategies that are not specifically addressed elsewhere in LEED. This credit category also rewards projects for including a LEED Accredited Professional on the team to ensure a holistic, integrated approach to design, construction, operations and maintenance. The following five credits are being pursued and/or evaluated for the project:

- Innovation in Design: Sustainable Purchasing – Low Mercury Lamps (yes)
- Innovation in Design: Thermal Comfort Survey (yes)
- Innovation in Design: EP: Heat Island
- Innovation in Design: LEED Accredited Professional (Colleen Soden) (yes)

Regional Priority

The Project anticipates achieving the following regional priority credits.

- Regional Priority: Rainwater (yes)
- Regional Priority: Renewable Energy (yes)
- Regional Priority: Optimize Energy Performance (yes)
- Regional Priority: Indoor Water Use (yes)

PHOTOVOLTAIC ROOF MOUNT SYSTEM

112 MODULES-ROOF MOUNTED - 46.48 kWDC
1513 MASSACHUSETTS AVE, ARLINGTON, MA 02476

SYSTEM SUMMARY:

(N) 112 - HANWHA Q. CELLS Q. PEAK DUO BLK ML-G10+ (415W) MODULES

CONSTRUCTION NOTE:

A LADDER SHALL BE IN PLACE FOR INSPECTION

THE PV MODULES ARE CONSIDERED NON-COMBUSTIBLE AND THIS SYSTEM IS A UTILITY GRID INTERACTIVE SYSTEM
A GROUNDING ELECTRODE SYSTEM IN ACCORDANCE WITH NEC 690-47 AND 250-50 THROUGH 60 250-166 SHALL BE PROVIDED PER NEC, GROUNDING ELECTRODE SYSTEM OF EXISTING BUILDING MAY BE USED AND BONDED TO AT THE SERVICE ENTRANCE. IF EXISTING SYSTEM IS INACCESSIBLE, OR INADEQUATE, OR IS ONLY METALLIC WATER PIPING, A SUPPLEMENTAL GROUNDING ELECTRODE WILL BE USED AT THE INVERTER LOCATION CONSISTING OF A UL LISTED 8 FT GROUND ROD WITH ACORN CLAMP. GROUNDING ELECTRODE CONDUCTORS SHALL BE NO LESS THAN #8 AWG AND NO GREATER THAN #8 AWG COPPER AND BONDED TO THE EXISTING GROUNDING ELECTRODE TO PROVIDE OR A COMPLETE GROUND.

EACH MODULE WILL BE GROUNDED USING THE SUPPLIED GROUNDING POINTS IDENTIFIED BY THE MANUFACTURER.

EXPOSED NON-CURRENT CARRYING METAL PARTS OF MODULE FRAMES, EQUIPMENT, AND CONDUCTOR ENCLOSURES SHALL BE GROUNDED IN ACCORDANCE WITH 250.134 OR 250.136(A) REGARDLESS OF VOLTAGE.

PROPER ACCESS AND WORKING CLEARANCE AROUND EXISTING AND PROPOSED ELECTRICAL EQUIPMENT WILL BE PROVIDED

ALL SIGNAGE WILL BE INSTALLED AS REQUIRED BY AND 2020 NEC.

HEIGHT OF INTEGRATED AC/DC DISCONNECT SHALL NOT EXCEED 6' 7" PER NEC 240.24

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE PROTECTED FROM PHYSICAL DAMAGE BETWEEN THE GROUNDING ELECTRODE AND THE PANEL (OR INVERTER) IF SMALLER THAN #6 AWG COPPER WIRE PER NEC 250-64B. THE GROUNDING ELECTRODE CONDUCTOR WILL BE CONTINUOUS, EXCEPT FOR SPLICES OR JOINTS AT BUSBARS WITHIN LISTED EQUIPMENT PER NEC 250.64C. ALL EXTERIOR CONDUIT SHALL BE PAINTED TO MATCH ADJACENT SURFACES.

THE PV CONNECTION IN THE PANEL BOARD SHALL BE POSITIONED AT THE OPPOSITE (LOAD) END FROM THE INPUT FEEDER LOCATION OR MAIN CIRCUIT LOCATION. NEC 690.64(B)(7)
SITE CONDITIONS SHALL PREVAIL IF NO SCALE IS GIVEN. DRAWINGS ARE NOT NECESSARILY TO SCALE. ALL DIMENSIONS SHALL BE VERIFIED BY SUBCONTRACTOR UPON COMMENCEMENT OF CONSTRUCTION.

DESIGN CRITERIA:

ROOF TYPE: - COMP SHINGLE
NUMBER OF LAYERS: - 01
ROOF FRAME: - 2"x6" TRUSS @24" O.C.
STORY: - 03 STORY
SNOW LOAD: - 40 PSF
WIND SPEED: - 127 MPH
WIND EXPOSURE: - C
EXPOSURE CATEGORY: - II
COORDINATES: - 42.425598, -71.191057

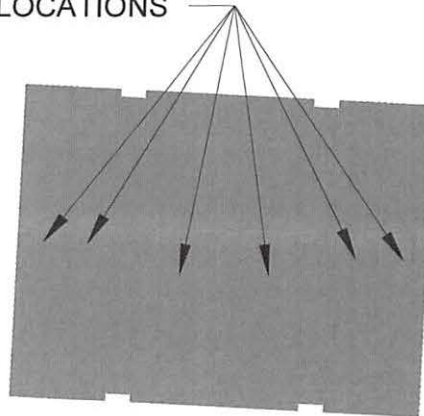
GOVERNING CODES:

2023 NATIONAL ELECTRICAL CODE (NEC)
2021 INTERNATIONAL FIRE CODE (IFC)
2021 INTERNATIONAL BUILDING CODE (IBC)
2021 INTERNATIONAL RESIDENTIAL CODE WITH MASSACHUSETTS AMENDMENTS(IRC)

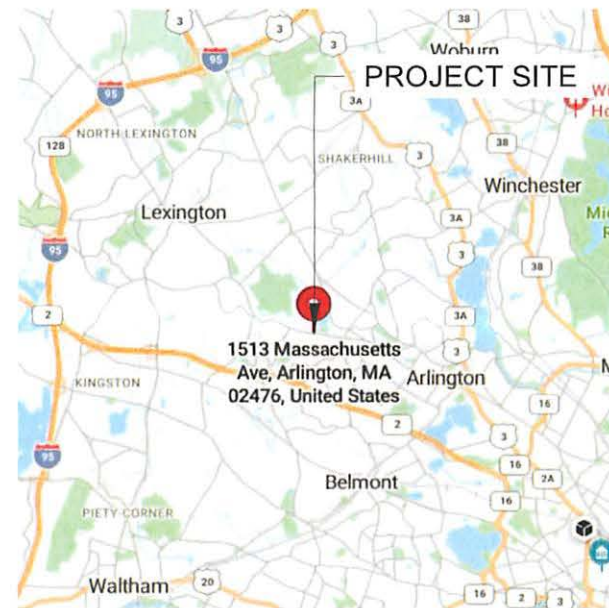
SHEET INDEX

PV-0	COVER SHEET
PV-1	SITE PLAN WITH ROOF PLAN
PV-2	ROOF PLAN WITH MODULES
PV-3	ATTACHMENT DETAILS
PV-4+	EQUIPMENT SPEC SHEETS

ARRAY LOCATIONS



1 AERIAL PHOTO
PV-0
SCALE: NTS



2 VICINITY MAP
PV-0
SCALE: NTS



.\LOGO.jpeg

3 BOW ST SUITE 3
LEXINGTON, MA 02420
PHONE NUMBER: 8889660726
EMAIL: office@greatskysolar.com

DRAWN BY
N.G.E.S

VERSION

DESCRIPTION	DATE	REV
INITIAL RELEASE	12/19/2024	UR

PROJECT NAME

ILYA ZVENIGORODSKIY
1513 MASSACHUSETTS AVE,
ARLINGTON, MA 02476
APN# N/A
UTILITY: EVERSOURCE
AHJ: MIDDLESEX COUNTY

SHEET NAME

COVER SHEET

SHEET SIZE

24" X 36"

SHEET NUMBER

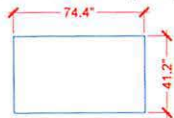
PV-0

● **ROOF ACCESS POINT** SHALL BE LOCATED IN AREAS THAT DO NOT REQUIRE THE PLACEMENT OF GROUND LADDERS OVER OPENINGS SUCH AS WINDOWS OR DOORS, AND LOCATED AT STRONG POINTS OF BUILDING CONSTRUCTION IN LOCATIONS WHERE THE ACCESS POINT DOES NOT CONFLICT WITH OVERHEAD OBSTRUCTIONS SUCH AS TREE LIMBS, WIRES OR SIGNS.

MODULE TYPE, DIMENSIONS & WEIGHT

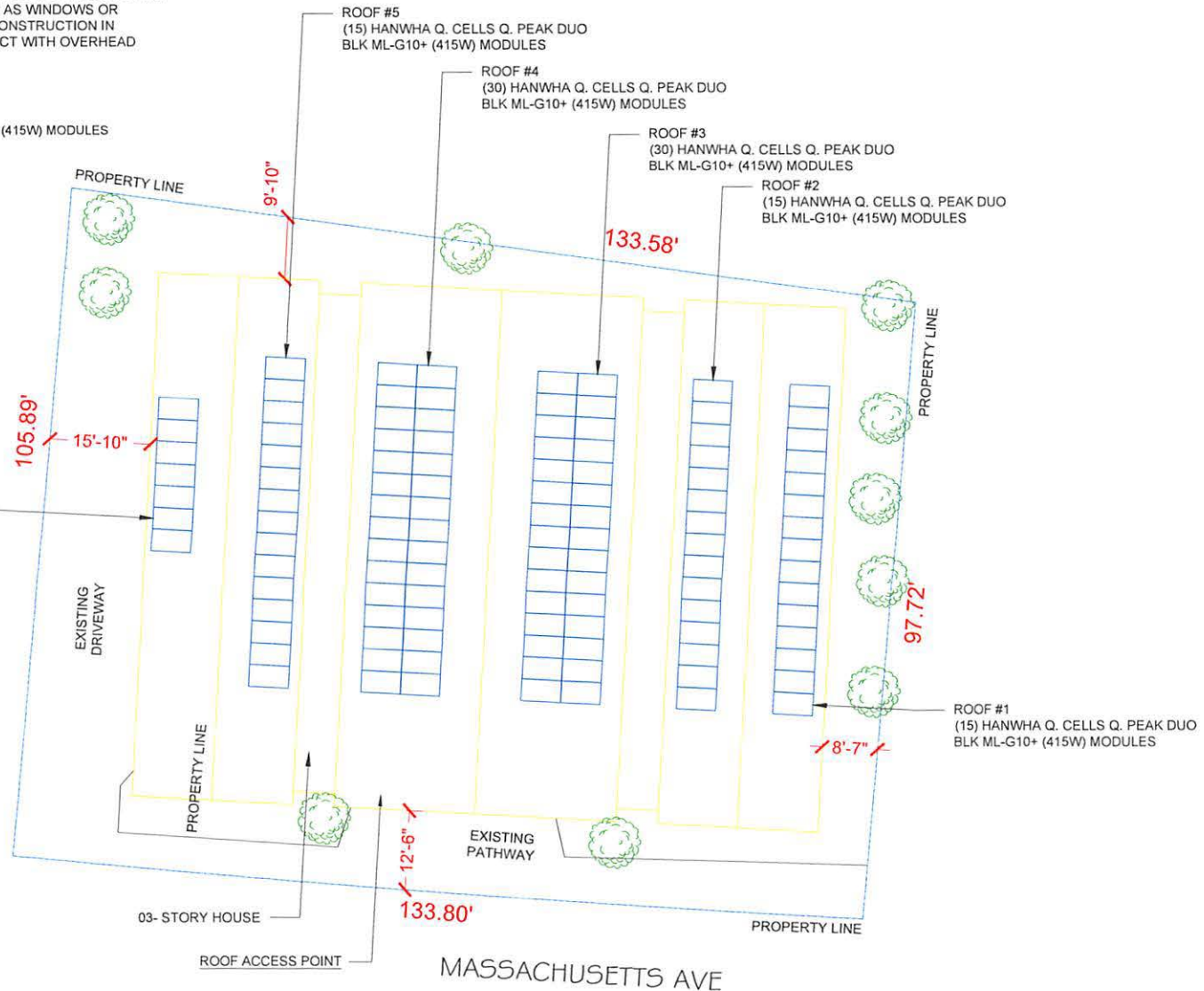
NUMBER OF MODULES = 112 MODULES
 MODULE TYPE = HANWHA Q. CELLS Q. PEAK DUO BLK ML-G10+ (415W) MODULES
 MODULE WEIGHT = 51.8 LBS / 23.5 KG.
 MODULE DIMENSIONS = 74.4" X 41.2" = 21.29 SF
 UNIT WEIGHT OF ARRAY = 2.43 PSF

PHOTOVOLTAIC MODULES
 HANWHA Q. CELLS Q. PEAK
 DUO BLK ML-G10+ (415W)



NOTE: * 3/4" OR GREATER IMC, RMC, FMC, LFMC, PVC, HDPE, NUCC, RTRC, LFNC, FMT, ENT DREMT CONDUIT RUN EXPOSED CONDUIT RUN SHALL BE MIN. 7/8" ABOVE ROOF. * ROMEX RUN INSIDE ATTIC

ROOF #6
 (7) HANWHA Q. CELLS Q. PEAK DUO
 BLK ML-G10+ (415W) MODULES



NOTE:
 INTERNATIONAL FIRE CODE SECTION 605.11.1.2 FOR RESIDENTIAL R-3 OCCUPANCIES AT LEAST THREE (3) FEET OF CLEARANCE ALONG THE EDGE (RAKE) OF THE ROOF TO A PANEL AND AT LEAST THREE (3) FEET FROM THE RIDGE OF THE ROOF TO A PANEL. PANELS SHALL BE AT LEAST ONE AND ONE-HALF (1-1/2) FEET FROM A VALLEY OR HIP. NO CLEARANCE IS REQUIRED AT THE EAVE. INTERNATIONAL FIRE CODE SECTION 605.11.1.2.4 ROOFS WITH HIPS AND VALLEYS - WHERE PANELS ARE TO BE LOCATED ON ONLY ONE SIDE OF A HIP OR VALLEY THAT IS OF EQUAL LENGTH, THE PANELS SHALL BE PERMITTED TO BE PLACED DIRECTLY ADJACENT TO THE HIP OR VALLEY. GAS METER LOCATED IN PROXIMITY OF THE PV INSTALLATION, LOAD CENTER, AND/OR DISCONNECTS. DISCONNECTS SHALL BE LOCATED IN COMPLIANCE WITH UTILITY AND THE AHJ (AUTHORITY HAVING JURISDICTION). PV INSTALLATION SHALL COMPLY WITH ALL APPLICABLE CODES

1 SITE PLAN WITH ROOF PLAN

SCALE: 1/8" = 1'-0"



.LOGO.jpeg

3 BOW ST SUITE 3
 LEXINGTON, MA 02420
 PHONE NUMBER: 8889660726
 EMAIL: office@greatskysolar.com

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N.G.E.S

VERSION

DESCRIPTION	DATE	REV
INITIAL RELEASE	12/19/2024	UR

PROJECT NAME

ILYA ZVENIGORODSKIY
 1513 MASSACHUSETTS AVE,
 ARLINGTON, MA 02476
 APN# N/A
 UTILITY: EVERSOURCE
 AHJ: MIDDLESEX COUNTY

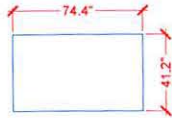
SHEET NAME
 SITE PLAN WITH
 ROOF PLAN

SHEET SIZE
 24" X 36"

SHEET NUMBER
PV-1

MODULE TYPE, DIMENSIONS & WEIGHT

NUMBER OF MODULES = 112 MODULES
 MODULE TYPE = HANWHA Q. CELLS Q. PEAK DUO BLK ML-G10+ (415W) MODULES
 MODULE WEIGHT = 51.8 LBS / 23.5 KG.
 MODULE DIMENSIONS = 74.4" X 41.2" = 21.29 SF
 UNIT WEIGHT OF ARRAY = 2.43 PSF
 PHOTOVOLTAIC MODULES
 HANWHA Q. CELLS Q. PEAK DUO BLK ML-G10+ (415W)



REAR YARD

ROOF #5
 (15) HANWHA Q. CELLS Q. PEAK DUO BLK ML-G10+ (415W) MODULES
 ROOF #4
 (30) HANWHA Q. CELLS Q. PEAK DUO BLK ML-G10+ (415W) MODULES

ROOF #3
 (30) HANWHA Q. CELLS Q. PEAK DUO BLK ML-G10+ (415W) MODULES
 ROOF #2
 (15) HANWHA Q. CELLS Q. PEAK DUO BLK ML-G10+ (415W) MODULES

ARRAY AREA & ROOF AREA CALC'S		
AREA OF NEW ARRAY (Sq. Ft.)	AREA OF ROOF (PLAN) VIEW (Sq. Ft.)	TOTAL ROOF AREA COVERED BY ARRAY %
2384.11	4738.10	50.32%

ROOF DESCRIPTION				
ROOF	ROOF TILT	AZIMUTH	TRUSS SIZE	TRUSS SPACING
#1	28°	93°	2"x6"	24" O.C.
#2	28°	273°	2"x6"	24" O.C.
#3	24°	93°	2"x6"	24" O.C.
#4	24°	273°	2"x6"	24" O.C.
#5	28°	93°	2"x6"	24" O.C.
#6	28°	273°	2"x6"	24" O.C.

.\LOGO.jpeg

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 LEXINGTON, MA 02420
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 1513 MASSACHUSETTS AVE,
 ARLINGTON, MA 02476
 APN# N/A
 UTILITY: EVERSOURCE
 AHJ: MIDDLESEX COUNTY

LEGEND

	- CHIMNEY
	- VENT, ATTIC FAN (ROOF OBSTRUCTION)
	- ROOF ATTACHMENT
	- TRUSS
	- CONDUIT
	- FIRE PATHWAY

NOTE:
 "ACTUAL ROOF CONDITIONS AND RAFTERS (OR SEAM) LOCATIONS MAY VARY. INSTALL PER MANUFACTURER(S) INSTALLATION GUIDELINES AND ENGINEERED SPANS FOR ATTACHMENTS."
 "A/C SURGE PROTECTIVE DEVICE TO BE INSTALLED ON INVERTER OUTPUT BEFORE BREAKER."

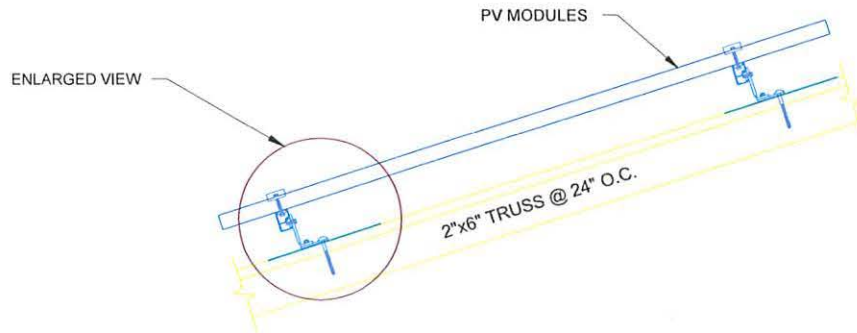
FRONT YARD
 MASSACHUSETTS AVE

NOTE: * 3/4" OR GREATER IMC, RMC, FMC, LFMC, PVC, HDPE, NUCC, RTRC, LFNC, FMT, ENT DREMT CONDUIT RUN EXPOSED CONDUIT RUN SHALL BE MIN. 7/8" ABOVE ROOF. * ROMEX RUN INSIDE ATTIC

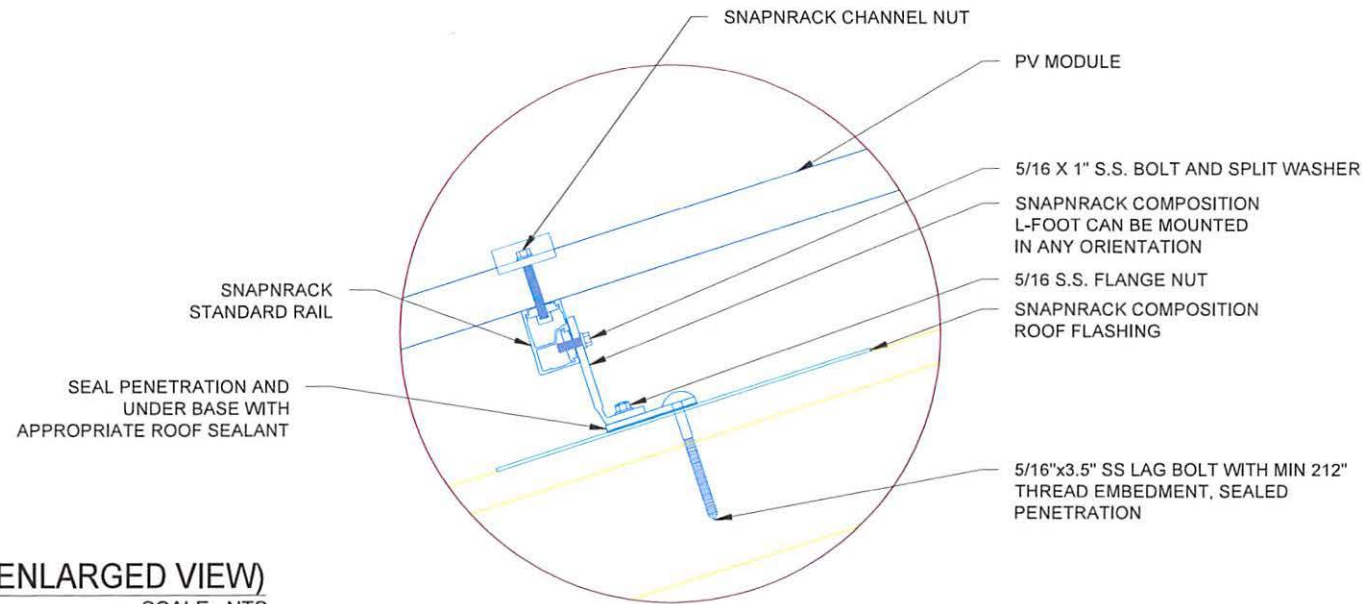
1 ROOF PLAN WITH MODULES
 SCALE: 3/16" = 1'-0"

N

NOTE: ACTUAL ROOF CONDITIONS AND RAFTERS (OR SEAM) LOCATIONS MAY VARY. INSTALL PER MANUFACTURER(S) INSTALLATION GUIDELINES AND ENGINEERED SPANS FOR ATTACHMENTS



1 ATTACHMENT DETAIL
SCALE: NTS



2 ATTACHMENT DETAIL (ENLARGED VIEW)
SCALE: NTS

.\LOGO.jpeg

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ARLINGTON, MA 02476
APN# N/A
UTILITY: EVERSOURCE
AHJ: MIDDLESEX COUNTY

SHEET NAME
ATTACHMENT
DETAIL

SHEET SIZE
24" X 36"

SHEET NUMBER
PV-3

Q.PEAK DUO BLK ML-G10+ SERIES



385-415 Wp | 132 Cells
21.0% Maximum Module Efficiency

MODEL Q.PEAK DUO BLK ML-G10+ / TS



Breaking the 21% efficiency barrier

Q.ANTUM DUO Z Technology with zero gap cell layout, boosts module efficiency up to 21.0%.



A reliable investment

Inclusive 25-year product warranty and 25-year linear performance warranty¹.



Enduring high performance

Long-term yield security with Anti LeTID Technology, Anti PID Technology² and Hot-Spot Protect.



Innovative all-weather technology

Optimal yields, whatever the weather with excellent low-light and temperature behaviour.



The most thorough testing programme in the industry

Qcells is the first solar module manufacturer to pass the most comprehensive quality programme in the industry. The new "Quality Controlled PV" of the independent certification institute TÜV Rheinland.

¹ See data sheet on rear for full information.

² APT test conditions according to IEC/TS 62804-12015, method A (+500V, 96h).

The ideal solution for:



Rooftop arrays on residential buildings



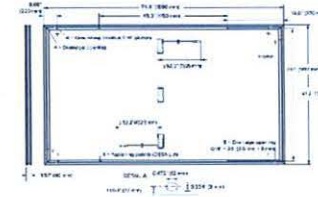
Rooftop arrays on commercial/industrial buildings



Q.PEAK DUO BLK ML-G10+ SERIES

Mechanical Specification

Format	78.4 in × 41.2 in × 1.5 in (including frame) (1990 mm × 1046 mm × 40 mm)
Weight	51.8 lbs (23.5 kg)
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodised aluminium
Cell	6 × 22 monocrystalline Q.ANTUM solar half cells
Junction box	7.09-3.98 in × 1.26-2.36 in × 0.59-0.71 in (53-101 mm × 32-60 mm × 15-18 mm) IP67, with bypass diodes
Cable	4 mm ² Solar cable; (+) ≥ 52.2 in (325 mm), (-) ≥ 52.2 in (325 mm)
Connector	Stauch MC4, IP68



Electrical Characteristics

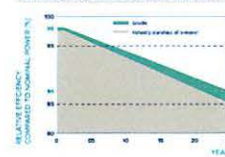
POWER CLASS	385	390	395	400	405	410	415
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC ¹ (POWER TOLERANCE +5 W/-0 W)							
Power at MPP ²	P _{MPP} [W]	385	390	395	400	405	410
Short Circuit Current ³	I _{SC} [A]	11.04	11.07	11.10	11.14	11.17	11.20
Open Circuit Voltage ⁴	V _{OC} [V]	45.19	45.23	45.27	45.3	45.34	45.37
Current at MPP	I _{MPP} [A]	10.59	10.65	10.71	10.77	10.83	10.89
Voltage at MPP	V _{MPP} [V]	36.36	36.62	36.88	37.13	37.39	37.64
Efficiency ⁵	η [%]	≥ 19.5	≥ 19.7	≥ 20.0	≥ 20.2	≥ 20.5	≥ 20.7

MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOD¹

Power at MPP ²	P _{MPP} [W]	288.8	292.6	296.3	300.1	303.8	307.6
Short Circuit Current ³	I _{SC} [A]	8.90	8.92	8.95	8.97	9.00	9.03
Open Circuit Voltage ⁴	V _{OC} [V]	42.62	42.65	42.69	42.72	42.76	42.79
Current at MPP	I _{MPP} [A]	8.35	8.41	8.46	8.51	8.57	8.62
Voltage at MPP	V _{MPP} [V]	34.59	34.81	35.03	35.25	35.46	35.68

¹ Measurement tolerances P_{MPP} ± 3%; I_{SC} ± 5%; V_{OC} ± 5% at STC: 1000 W/m², 25 ± 2 °C, AM 1.5 according to IEC 60904-3, 800 W/m², NMOD, spectrum AM 1.5

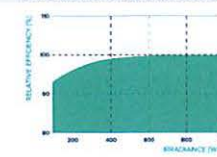
Qcells PERFORMANCE WARRANTY



At least 98% of nominal power during first year. Thereafter max. 0.5% degradation per year. At least 93.5% of nominal power up to 10 years. At least 86% of nominal power up to 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Qcells sales organisation of your respective country.

PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25 °C, 1000 W/m²)

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I _{SC}	α [%/K]	-0.04	Temperature Coefficient of V _{OC}	β [%/K]	0.27
Temperature Coefficient of P _{MPP}	γ [%/K]	-0.34	Nominal Module Operating Temperature	NMOD [°F]	109 ± 5.4 (43 ± 3 °C)

Properties for System Design

Maximum System Voltage	V _{MS} [V]	1000 (IEC)/1000 (UL)	PV module classification	Class II
Maximum Series Fuse Rating	[A DC]	20	Fire Rating based on ANSI/UL 61730	TYPE 2
Max. Design Load, Push/Pull ¹	[ps / t]	75 (3500 Pa) / 75 (3500 Pa)	Permitted Module Temperature on Continuous Duty	-40 °F up to +85 °F (-40 °C up to +85 °C)
Max. Test Load, Push/Pull ¹	[ps / t]	112 (5400 Pa) / 112 (5400 Pa)		

¹ See Installation Manual

Qualifications and Certificates

UL 61730-1A UL 61730-2, CE-compliant, Quality Controlled PV - TÜV Rheinland, IEC 61215-2016, IEC 61730-2016, U.S. Patent No. 9,893,275 (solar cells).



¹ Contact your Qcells Sales Representative for details regarding the module's eligibility to be Buy American Act (BAA) compliant.

Qcells pursues minimizing paper output in consideration of the global environment.

Recycling Instructions: Please see the back of the module for detailed instructions on how to dispose of this product. For more information on approved recyclers of this product, please visit www.qcells.com

qcells

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LEXINGTON, MA 02420
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EMAIL: office@greatkysolar.com

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N.G.E.S

VERSION

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ILYA ZVENIGORODSKIY
1513 MASSACHUSETTS AVE,
ARLINGTON, MA 02476
APN# N/A
UTILITY: EVERSOURCE
AHJ: MIDDLESEX COUNTY

SHEET NAME

SPEC SHEETS

SHEET SIZE

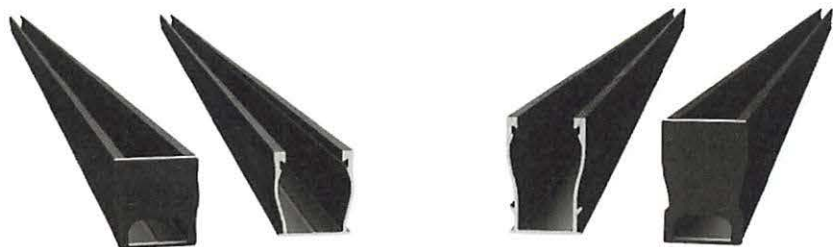
24" X 36"

SHEET NUMBER

PV-4

Ultra Rail

UR-40
UR-60



The Ultimate Value in Rooftop Solar



Industry leading Wire Management Solutions



Single Tool Installation



Mounts available for all roof types



All SnapNrack Module Clamps & Accessories are compatible with both rail profiles

Start Installing Ultra Rail Today

RESOURCES snapnrack.com/resources
DESIGN snapnrack.com/configurator
WHERE TO BUY snapnrack.com/where-to-buy

SnapNrack Ultra Rail System

A sleek, straightforward rail solution for mounting solar modules on all roof types. Ultra Rail features two rail profiles; UR-40 is a lightweight rail profile that is suitable for most geographic regions and maintains all the great features of SnapNrack rail, while UR-60 is a heavier duty rail profile that provides a larger rail channel and increased span capabilities. Both are compatible with all existing mounts, module clamps, and accessories for ease of install.

The Entire System is a Snap to Install

- New Ultra Rail Mounts include snap-in brackets for attaching rail
- Compatible with all the SnapNrack Mid Clamps and End Clamps customers love
- Universal End Clamps and snap-in End Caps provide a clean look to the array edge



Unparalleled Wire Management

- Open rail channel provides room for running wires resulting in a long-lasting quality install
- Industry best wire management offering includes Junction Boxes, Universal Wire Clamps, MLPE Attachment Kits, and Conduit Clamps
- System is fully bonded and listed to UL 2703 Standard

Heavy Duty UR-60 Rail

- UR-60 rail profile provides increased span capabilities for high wind speeds and snow loads
- Taller, stronger rail profile includes profile-specific rail splice and end cap
- All existing mounts, module clamps, and accessories are retained for the same great install experience



Quality. Innovative. Superior.

SnapNrack Solar Mounting Solutions are engineered to optimize material use and labor resources and improve overall installation quality and safety.

877-732-2860 www.snapnrack.com contact@snapnrack.com

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.\LOGO.jpeg

3 BOW ST SUITE 3
LEXINGTON, MA 02420
PHONE NUMBER: 8889660726
EMAIL: office@greatkysolar.com

DRAWN BY
N.G.E.S

VERSION

DESCRIPTION	DATE	REV
INITIAL RELEASE	12/19/2024	UR

PROJECT NAME

ILYA ZVENIGORODSKIY
1513 MASSACHUSETTS AVE,
ARLINGTON, MA 02476
APN# N/A
UTILITY: EVERSOURCE
AHJ: MIDDLESEX COUNTY

SHEET NAME

SPEC SHEETS

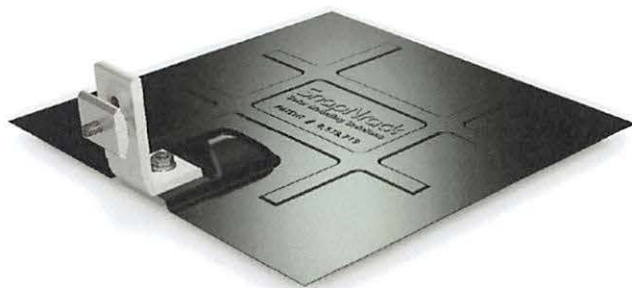
SHEET SIZE

24" X 36"

SHEET NUMBER

PV-5

Flashed L Foot



Reliable & Weatherproof Roof Attachment



Cutting of shingles not required



Preassembled, snap-in hardware reduces installation time



Single tool installation, using a standard 1/2" socket



Included in Series 100 UL 2703 Listing

Start Installing the Flashed L Foot Today

RESOURCES
DESIGN
WHERE TO BUY

snapnrack.com/resources
snapnrack.com/configurator
snapnrack.com/where-to-buy

SnapNrack Series 100 Flashed L Foot Kit

is an industry-leading, weatherproof solution for attaching to composition shingle roofs. The Flashed L Foot provides a fully flashed method for mounting the SnapNrack Series 100 system. The combination of Series 100 and the Flashed L foot is guaranteed to improve labor times and ensure the highest quality install possible.

Flashing

- Available in black galvanized steel or aluminum for enhanced corrosion resistance
- L Foot is attaches to bottom edge of flashing, removing the need for shingle cutting
- Innovative stamped features provide increased rigidity



L Foot

- Engineered for maximum adjustability with the ability to orient in any direction
- Vertical adjustability up to 3" using available spacers

L Foot Base

- Provides a long lasting watertight seal over the life of the system that does not rely on rubber (elastomeric seals) that will degrade over time
- Easily installs with off-the-shelf lag screws



Channel Nut

- Provides snap-in installation to the rail channel with no drilling required
- Wide range of adjustability due to sliding ability in rail prior to final tightening

Quality. Performance. Innovation.

SnapNrack solutions are focused on simplifying the installation experience through intuitive products and the best wire management in the industry.

SnapNrack
Solar Mounting Solutions

877-732-2860

www.snapnrack.com

contact@snapnrack.com

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.\LOGO.jpeg

3 BOW ST SUITE 3
LEXINGTON, MA 02420
PHONE NUMBER: 8889680726
EMAIL: office@greatsolarsolar.com

DRAWN BY
N.G.E.S

VERSION

DESCRIPTION	DATE	REV
INITIAL RELEASE	12/19/2024	UR

PROJECT NAME

ILYA ZVENIGORODSKIY
1513 MASSACHUSETTS AVE,
ARLINGTON, MA 02476
APN# N/A
UTILITY: EVERSOURCE
AHJ: MIDDLESEX COUNTY

SHEET NAME
SPEC SHEETS

SHEET SIZE
24" X 36"

SHEET NUMBER
PV-6

NOTES:

1. INFORMATION SHOWN ON THIS PLAN IS THE RESULT OF A FIELD SURVEY PERFORMED BY SPRUHAN ENGINEERING, P.C. AS OF 5/10/2024.

2. DEED #1513-1517: BOOK 26219, PAGE 127
DEED #1517-1519: BOOK 11361, PAGE 019
PLAN 1036 OF 1941;
STREET LAYOUT 1913
STREET LAYOUT 1892
MIDDLESEX COUNTY SOUTH DISTRICT REGISTRY OF DEEDS

3. THIS PLAN IS NOT INTENDED TO BE RECORDED.

4. I CERTIFY THAT THE DWELLING SHOWN IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE. IT IS LOCATED IN ZONE X, ON FLOOD HAZARD BOUNDARY MAP NUMBER 25017C0412E, IN COMMUNITY NUMBER: 250177, DATED 6/4/2010.

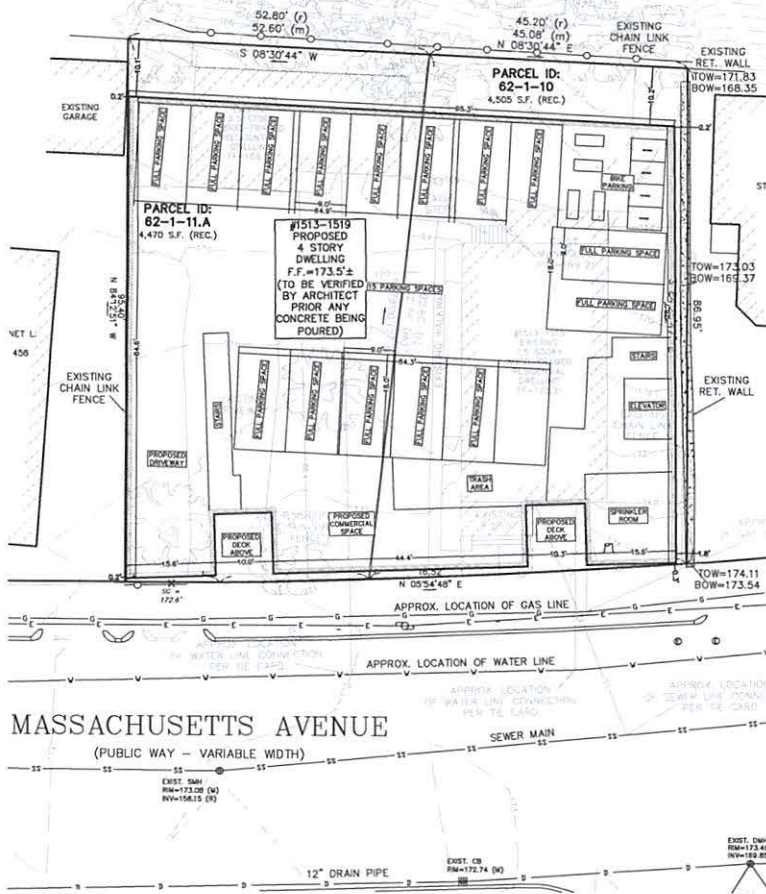
5. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT USES OF THE LAND; HOWEVER THIS NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.

6. FIRST FLOOR ELEVATIONS ARE TAKEN AT THRESHOLD.

7. NO RESPONSIBILITY IS TAKEN FOR ZONING TABLE AS SPRUHAN ENGINEERING, P.C. ARE NOT ZONING EXPERTS. TABLE IS TAKEN FROM TABLE PROVIDED BY LOCAL ZONING ORDINANCE. CLIENT AND/OR ARCHITECT TO VERIFY THE ACCURACY OF ZONING ANALYSIS.

8. THE ELEVATIONS SHOWN ARE BASED ON CITY OF ARLINGTON DATUM.

BOSTON & MAINE RAIL ROAD



Spruhan
Engineering, P.C.

60 JEWETT ST. (SUITE 2)
NEWTON, MA 02459
Tel: 617-612-0722
Email: edmond@spruhaneng.com

1513-1519
MASSACHUSETTS
AVENUE, ARLINGTON
MASSACHUSETTS

PROPOSED PLOT
PLAN

REVISION BLOCK

BY	DESCRIPTION	DATE
M.L.	MODIFIED PER CLIENT'S REQUEST	12.07.24
M.L.	MODIFIED PER CLIENT'S REQUEST	07.11.25

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DATE: 07/11/2025
DRAWN BY: M.L.
CHECKED BY: C.C.
APPROVED BY: E.S.

PROPOSED PLOT
PLAN

SHEET 1 OF 1

THE CONTRACTOR SHALL REPORT TO THE OWNER AND ENGINEER OF ANY AND ALL ACCIDENTS, DAMAGE TO PROPERTY, PERSONAL INJURY OR DEATH, OR ANY OTHER UNDESIRABLE OCCURRENCES THAT MAY OCCUR ON THESE PLACES, ANY PROPOSED REVISIONS TO THE WORK, IF REQUESTED BY THE OWNER, AND ANY OTHER MATTERS THAT MAY ARISE DURING THE CONSTRUCTION LATER REVIEWED AND APPROVED BY THE OWNER AND THE ENGINEER.

IN ORDER TO PROTECT THE PUBLIC SAFETY DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN AT ALL TIMES ADEQUATE SAFETY MEASURES, INCLUDING ALL NECESSARY SAFETY DEVICES AND PERSONNEL, WARNING LIGHTS, AND SIGNAGE, TO PROTECT THE PUBLIC FROM THE CONSTRUCTION ACTIVITIES.

ALL WORK SHALL CONFORM TO THE CODES OF ARLINGTON GENERAL CONSTRUCTION STANDARDS.

THE CONTRACTOR SHALL REGULARLY INSPECT THE PERMITTER OF THE PROJECT TO CLEAN UP AND REMOVE LOOSE CONSTRUCTION DEBRIS IF IT LEAVES THE SITE. ALL OBSTRUCTION DEBRIS SHALL BE PROMPTLY REMOVED OR STORED TO A LEGAL NEIGH SITE. ALL TRUCKS LEAVING THE SITE SHALL BE COVERED.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTITUTE, EXERCISE AND MAINTAIN ADEQUATE AND NECESSARY SAFETY MEASURES. EXCESSIVE SOIL EROSION SHOULD NOT OCCUR.

THE LOCATION OF UNDERGROUND UTILITIES AS REPRESENTED ON THESE PLANS AND ALL INFORMATION PROVIDED BY THE CITY OF ARLINGTON, RESPECTIVE UTILITY COMPANIES OR MUNICIPAL DEPARTMENTS SUPPLEMENTED BY THE CONTRACTOR'S FIELD SURVEY SHALL BE THE BASIS FOR THE ACCURACY OF THESE LOCATIONS OR THAT ALL UNDERGROUND UTILITIES ARE LOCATED AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE ON SITE TWO HOURS PRIOR TO THE START OF CONSTRUCTION. DO NOT TELEPHONE THE CITY OF ARLINGTON FOR ASSISTANCE.

ROAD

SEWER LINE
SEWER MANHOLE
WATER LINE
GAS LINE
UTILITY POLE
GAS VALVE
OVERHEAD ELECTRIC SERVICE
WATER VALVE
CATCH BASIN
FENCE
CONTOUR LINE (MUR)
CONTOUR LINE (MNR)
SPOT GRADE
DRAIN MANHOLE
HYDRANT
TREE

1513-1519
MASSACHUSETTS
AVENUE
ARLINGTON,
MASSACHUSETTS

REVISION BLOCK

DESCRIPTION	DATE
MODIFIED PER CLIENT'S REQUEST	12.07.2
MODIFIED PER CLIENT'S REQUEST	07.21.2

[illegible]

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SHEET 1 OF 2



EXISTING AREAS		
LOT AREA		8,975.00 S.F.
EXISTING IMPERVIOUS AREAS		
BUILDINGS		1,965.90 S.F.
COVERED PORCH		74.05 S.F.
DRIVEWAY		1,482.24 S.F.
WALKWAYS		152.73 S.F.
STEPS		31.73 S.F.
RETAINING WALL		74.61 S.F.
TOTAL		3,787.26 S.F.
EXISTING PERVIOUS AREAS		
N/A		S.F.
TOTAL		0.00 S.F.
LANDSCAPE AREA		5,193.74 S.F.

PROPOSED AREAS	
LOT AREA	8,975.00 S.F.
PROPOSED IMPERVIOUS AREA	
BUILDING	7,485.19 S.F.
DECKS	219.55 S.F.
RETAINING WALL	74.61 S.F.
TOTAL	7,779.35 S.F.
PROPOSED PERVIOUS AREA	
N/A	S.F.
TOTAL	0.00 S.F.
LANDSCAPE AREA	1,195.65 S.F.

TOTAL EXISTING IMPERVIOUS AREA	= 3,781.26 S.F.
TOTAL PROPOSED IMPERVIOUS AREA	= 7,779.35 S.F.
TOTAL <u>INCREASE</u> IN IMPERVIOUS AREA	= <u>3,998.09 S.F.</u>

DEEP OBSERVATION HOLE LOG											
DEEP OBSERVATION HOLE NUMBER						GROUND ELEVATION				RTM (ft)	
Depth (ft)	Vertical Error	Mud Color	Reservoir Properties			Texture (SS/A)	Grain Fragments (Percent by Volume)	Strat. Unit	Lithology (Notes)	Other	
			Depth (ft)	Color	Percent						
0-15	AFB										
10-42	FR										
42-70	CL	1745				SILT (LAMP)	12	5	HR	FR	

NOTES:
1. NO WEAVING OR ROCKS OBSERVED
2. STOPPED AT DEPTH OF 70' DUE TO REFUSAL. LARGE BOULDER ON LEDGE
3. LOGGED BY MATTHEW MIA, SE14350 ON 07/26/04
4. FILE CONSISTED OF CONSTRUCTION DEBRIS

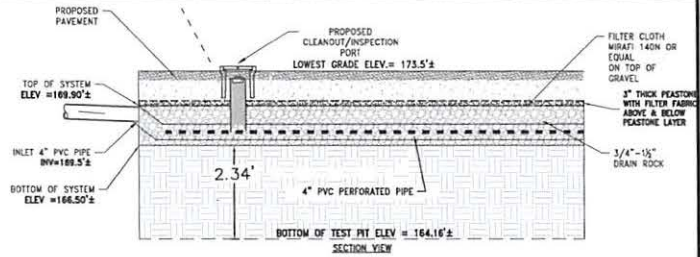
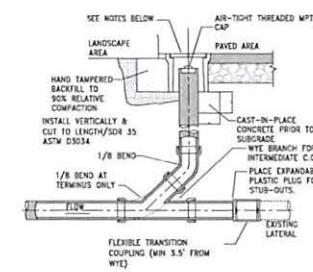
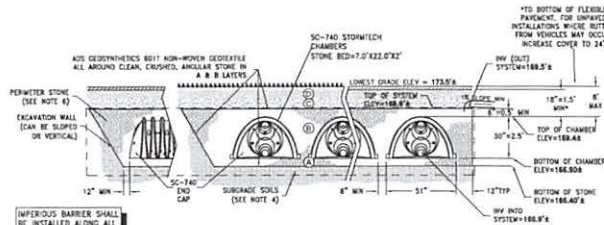
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NOTES:

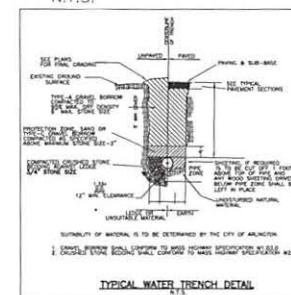
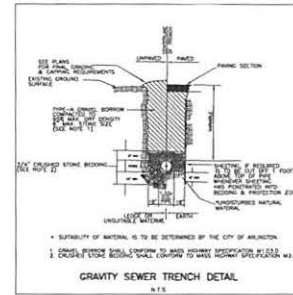
1. NO WEETING OR REEDS OBSERVED
2. STOPPED AT DEPTH OF 102' DUE TO REFUSAL, LARGE BOULDERS.
3. ALL THE SOILS ENCOUNTERED WAS FILL, F&L COMPOSED OF ASH AND CO.
4. LOGGED BY MATTHEW MUI, 5614359 ON 07/26/2024

	Summary Table			
	Runoff Flow Rate		Volume of Runoff	
	EXISTING	PROPOSED	EXISTING	PROPOSED
2-Year Storm	0.28 cfs	0.06 cfs	1,006 cfs	12 cfs
10-Year Storm	0.50 cfs	0.01 cfs	1,850 cfs	79 cfs
25-Year Storm	0.69 cfs	0.03 cfs	2,452 cfs	123 cfs
100-Year Storm	1.0 cfs	0.07 cfs	3,454 cfs	222 cfs

INFILTRATION SYSTEM



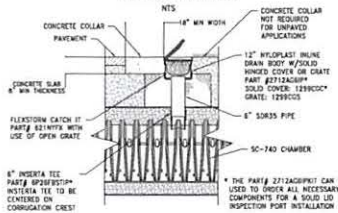
INFILTRATION SYSTEM S2 CRUSHED STONE N.T.S.



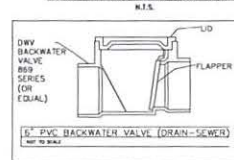
NOTES:

1. RECTANGULAR OR CIRCULAR BOXES ARE PERMITTED.
2. CONCRETE/THERMALLY LIDS ARE ACCEPTABLE IN NON-VEHICULAR AREAS. H-20 CAST IRON TRAFFIC LIDS AND BOXES IN VEHICULAR AREAS.
3. ALL CLEANOUT LIDS SHALL BE MARKED WITH AN "S" OR THE WORD "SEWER" FOR SANITARY SEWER CLEANOUTS.
4. CLEANOUT PIPE SHALL BE THE SAME DIAMETER AS THE CONNECTED SITE PIPE.
5. TERMINATE C.O. AT CLOSEST JOINT TO SURFACE WITH TEMPORARY PLUG. AFTER ALL BACKFILL IS COMPLETE AND SUB-GRADE MADE IN AREAS TO BE PAVED, THE FINAL RISER PIPE AND BOX SHALL BE INSTALLED AS SHOWN.

CLEANOUT TO GRADE



SC-740 6\"/>

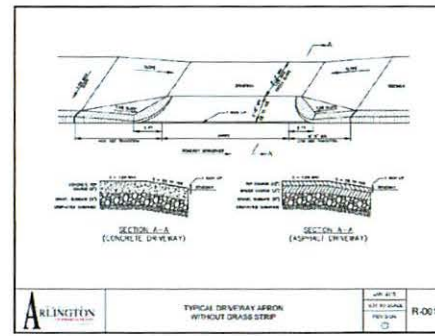
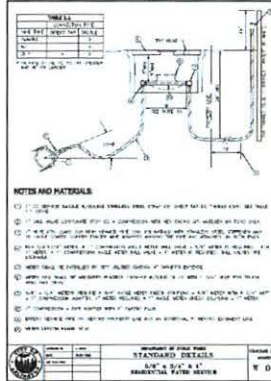
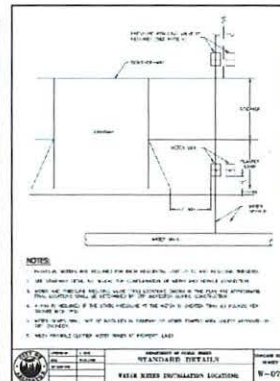
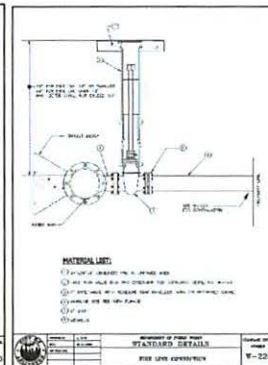
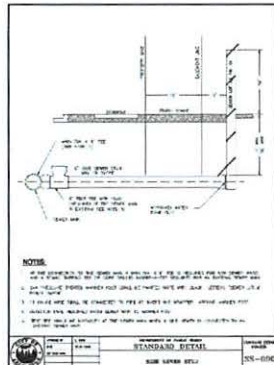


PLEASE NOTE:

1. THE LISTED ASHSTO EXCAVATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE "CLEAN, CRUSHED, ANGULAR NO. 4 (ASHSTO) WASH STONE".
2. STORMTECH COMPACTOR REQUIREMENTS ARE MET FOR "A" LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6\"/>

NOTES:

1. SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2822 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2797 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTOR REQUIREMENTS FOR FOUNDATION, EXHUMENT, AND FILL MATERIALS.
4. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL WEATHERING CONDITIONS.
5. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
6. ONCE LAYER "C" IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER "D" UP TO THE FINISHED GRADE. MOST PAVEMENT SUBGRADE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER "C" OR "D" AT THE SITE DESIGN ENGINEER'S DISCRETION.



**Spruhan
Engineering, P.C.**
80 Kewitt St, Suite 11
Newton, MA 02459
Tel: 617-616-0722
Email: eng@spruhan.com

**1513-1519
MASSACHUSETTS
AVENUE
ARLINGTON,
MASSACHUSETTS**

CIVIL PLAN

REVISION BLOCK

BY	DESCRIPTION	DATE
M.L.	MODIFIED PER CLIENT'S REQUEST	12.07.24
M.L.	MODIFIED PER CLIENT'S REQUEST	07.21.25

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DATE:	08/14/2024
DESIGNED BY:	M.L.
CHECKED BY:	E.S.
APPROVED BY:	E.S.

DETAILS

SHEET 2 OF 2



SPRUHAN ENGINEERING, P.C.

80 Jewett St Unit One Newton, MA 02458
phone: 617-816-0722 email: edmond@spruhaneng.com

July 31, 2025

Arlington Department of Planning and Community Development (DPCD)
730 Massachusetts Ave,
Arlington, MA 02476

RE: 1513-1519 Massachusetts Avenue,
Arlington, MA

The purpose of this letter is to give a brief description of the civil engineering design for the proposed project located at 1513-1519 Massachusetts Avenue, Arlington, MA.

The property is located in Massachusetts Avenue Between Lancaster Road and Hilbert Street. The existing property is bounded by residential dwellings on the sides. The existing roof area on the lot is 2039.95 S.F., the existing paved area is 1482.24 S.F., the existing impervious areas are 259.07 S.F., and the existing landscaped areas on the lot are 5,193.74 S.F. There is currently no infiltration system.

The development consists of a proposed 5 story dwelling, 15 Units, 1 garage and commercial level, and landscaped areas. The total proposed development roof will have an area of 7,485.19 S.F, the remaining impervious will have an area of 294.16 S.F. and the remaining landscaped portion will have a footprint of 1,195.65 S.F.

The building will contain the utilities services described below:

- A new subsurface infiltration system composed of 16 Stormtech units and crushed stone pit below to capture the runoff from the site.
- A new 6" sewer line connected to the sewer main at Massachusetts Avenue.
- A new water line connected to the water main at Massachusetts Avenue.
- A new Fire line connected to the water main at Massachusetts Avenue.
- A new 6" drain overflow line connected to the drain main at Massachusetts Avenue.

In accordance with Section 2-(D)(1) of the City of Arlington stormwater management rules & regulations, the proposed development requires a major stormwater management permit because it will increase the amount of impervious surface at the Property by more than 1000 SF. Spruhan has designed the proposed stormwater management system to meet these standards.

The proposed infiltration system consists of 16 Stormtech Chambers embedded in a crushed stone pit with an overflow connection to the City's drainage system and is designed to control the runoff from the site for the 2, 10, 25, and 100-Year 24-hour duration storm events and retain and infiltrate the storm of the large storm event after Arlington city requirements which will substantially improve drainage at the property.

The reduction of run-off for all storm events are show in the table below:

	Summary Table			
	Runoff Flow Rate		Volume of Runoff	
	EXISTING	PROPOSED	EXISTING	PROPOSED
2-Year Storm	0.28 cfs	0.00 cfs	1,006 cfs	12 cfs
10-Year Storm	0.50 cfs	0.01 cfs	1,850 cfs	70 cfs
25-Year Storm	0.69 cfs	0.03 cfs	2,452 cfs	123 cfs
100-Year Storm	1.0 cfs	0.07 cfs	3,454 cfs	222 cfs

The runoff is going to be captured through roof drains.. The proposed infiltration system is designed to provide a total storage of 3,411 CF and the total storage required for a 1.0-inch storm is 648.28 CF.

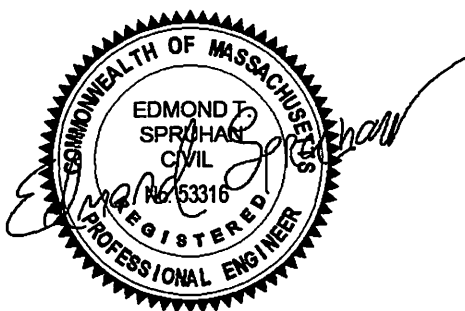
The proposed infiltration system complies with the City of Arlington stormwater management standards.

An Operations & Maintenance plan is provided for the information of the maintenance of the drainage system.

If you have any questions or desire additional information, please feel free to call.

Sincerely,

Edmond Spruhan
617-816-0722



SPRUHAN ENGINEERING, P.C.

OPERATIONS & MAINTENANCE PLAN

1513-1519 MASSACHUSETTS AVENUE,
ARLINGTON, MA.



Prepared by: Spruhan Engineering, P.C.

July 22, 2025

Operations & Maintenance Plan

Introduction

The following Stormwater Operations & Maintenance plan is for **1513-1519 Massachusetts avenue, Arlington, MA**. All erosion and sediment control measures to be used are to be constructed and installed according to the 'Massachusetts Erosion and Sediment Control Guidelines for Urban and Sub-Urban Areas.'

The plan consists of the following elements:

- Owners' information
- Operation and maintenance guidance – Pre and Post Construction
- Landscape installation and maintenance guidance
- Proposed inspection log

All erosion and sediment control measures must be installed prior to the commencement of any work. All sediment and erosion control measures shall remain in place until the entire site has been stabilized. The site is deemed stabilized when all landscaped areas have been loamed and seeded with vegetation having had the chance to establish itself. Any proposed paved areas shall have their binder course of pavement installed prior to the removal of these control measures.

The long-term operation and maintenance of a stormwater management system is as critical to its performance as its design and construction. Proper operation and maintenance ensure that the BMP will continue to remove pollutants effectively over the long-term, decreases the risk of re-suspending sediment; and therefore, improves water quality. Without proper maintenance, BMPs are likely to fail and no longer provide the necessary stormwater treatment.

The maintenance of the Drainage System is the exclusive responsibility of the Property Owner. Annual reports (example below) should be submitted to the Town Engineer every January for the prior year.

Property Owners: IG Investments LLC

Name and contact information:

Managers: ILYA ZVENIGORODSKIY

Address: 226 Harvard St, Brookline, MA, 02446

Contact info: 860-833-4081

Change on ownership: The owner(s) of the stormwater management systems, with the exception of those associated with two-family dwellings, shall notify the Department of Public Works and Conservation Commission of changes in ownership or assignment of financial responsibility.

This plan is valid in perpetuity and any future property owners are solely responsible for the management of the stormwater system on-site in accordance with this O&M Plan

Operations & Maintenance

The following operations and maintenance plan has been developed in order to preserve the drainage infrastructure that will be constructed and to ensure the drainage and infiltration system continues to function as designed.

- **Before & During Construction Operation and Maintenance Plan:**

- Significant efforts shall be made to only disturb the minimum amount of area necessary to reduce potential erosion and sediment runoff. The control of dust in disturbed areas shall consist of at the least, wetting of disturbed soil or application of calcium chloride as required to minimize airborne dust.
- A stabilized construction entrance shall be installed to reduce the tracking of material onto the main road, &, if necessary, a wheel wash station put in place.
- Hay wattles shall be installed per the site plan to prevent sediment from being washed off site.
- All drainage structures shall be protected by filter fabric (or approved equal) to prevent sedimentation from entering the drainage system during the construction period.
- Driveway, pavement, and roadway (if required) areas shall be swept to remove sediments prior to introduction into the storm water management system.
- Drainage structures shall be inspected daily and cleaned as necessary of all sedimentation and construction materials during the construction period.
- The contractor is required to contact the engineer of record for drainage system inspection at least 72 hours prior to backfilling in order to receive inspection signoff.

- **Post Construction Operation and Maintenance Plan**

Once the construction is completed, it is the owner's responsibility to maintain the items outlined below to ensure the efficiency and integrity of the drainage systems. The post construction inspections shall take place at a minimum of once during the Spring (March-May), and a minimum of once during the fall (September – November) and after every major storm.

- **Pipes** shall be inspected on a minimum on a semi-annual basis. These inspections shall take place during the spring and fall months of the year. The inspector shall take note of any debris/sediment/clogging and shall document the condition of each structure. Based upon the observed condition, the inspector shall make recommendations if any further action is required.
- **All drainage structures, including manholes trench drains, area drains, cleanouts and catch basins**, shall be inspected four times per year and shall be cleaned of all sand, debris, and sediment four times per year or whenever the depth of deposits is greater than or equal to one half the depth from the bottom of the invert of the lowest pipe in the basin.
- **Roof Gutters** shall be inspected annually and after major rain events. Remove leaves and sediment as necessary to allow rainwater to flow to system.

○ **Storm-tech SC-740 Maintenance procedures:**

- Storm-tech system shall be inspected at a minimum on a semi-annual basis, or after a major storm event.
- Remove lid and cap from inspection ports which must be brought to finished grade.
- Using a flashlight and stadia rod, measure the depth of sediment
- If sediment is above 3" depth, then cleaning is required
- A licensed professional shall provide cleanout/ flushing services of all sediment and debris via cleanouts and catch basins located per plans.
- All caps and covers shall be replaced

Other Activities:

Pavement Sweeping: The paved areas shall be swept every quarter, so four (4) times per year.

Lawn and Landscape Repairs: The lawn and landscaped areas on the site shall be inspected in the spring and fall of each year and the areas shall be restabilized as needed by seeding as lawn or mulching landscaped areas.

An INSPECTION LOG example format is shown below on Table B.1. This must be filled every time an inspection or maintenance activity is performed on any element of the stormwater management on site, included but not limited to:

- Pretreatment devices.
- Vegetation or filter media.
- Control structures.
- Embankments and slopes.
- Inlet and outlet channels and structures.
- Underground drainage.
- Sediment and debris accumulation in storage and forebay areas (including catch basins).
- Any nonstructural practices.
- Any other item that could affect the proper function of the stormwater management system

*** FINAL IMPORTANT NOTE: PROVISIONS MUST EXIST ALLOWING THE CITY OF NEWTON OR ITS DESIGNEE TO ENTER THE PROPERTY AT REASONABLE TIMES AND IN A REASONABLE MANNER FOR THE PURPOSE OF INSPECTION.**

ILYA ZVENIGORODSKIY
PROPERTY OWNER

ATTACHMENT A. LOG SHEET AND TABLES

**OPERATION & MAINTENANCE PLAN
LOG SHEET
1513-1519 MASSACHUSETTS AVENUE, ARLINGTON, MA.**

INSPECTION REPORT:

Inspection Firm: _____

Inspector's Name: _____ Date: _____

Components Inspected: _____

Signed: _____

SYSTEM MAINTENANCE:

Maintenance Firm: _____ Date: _____

Catch Basin Cleaned: Yes _____ No _____ Comments: _____

Manhole & Sumps Cleaned: Yes _____ No _____ Comments: _____

Drain Lines Inspected: Yes _____ No _____ Comments: _____

Stormwater unit System Cleaned: Yes _____ No _____ Comments: _____

Estimate of Material Removed: _____

Other Comments: _____

Signed: _____

Table 1 - Inspection log for BMP's

STORMWATER MANAGEMENT SYSTEMS INSPECTION LOG						
DATE	NAME OF INSPECTOR	NAME/TYPE OF BMP INSPECTED	CONDITION OF BMP OBSERVED	DESCRIPTION OF NEED FOR MAINTENANCE	OBSERVATIONS OF ANY PHYSICAL CHANGES TO SYSTEM COMPARED TO AS BUILT PLAN	ANNUAL SUBMISSION TO DPW

STORMWATER REPORT FOR:

1513-1519 Massachusetts Avenue, Arlington, MA



Prepared by:
Spruhan Engineering, P.C.



07/31/2025

80 Jewett St, Suite 1
Newton, MA 02458

1.0	Introduction.....	3
2.0	Existing Conditions.....	3
2.1	Existing Topography and Drainage Infrastructure.....	3
3.0	Proposed Conditions.....	4
3.1	Project Description.....	4
3.2	Storm Water Runoff	4
3.3	Infiltration system	4
4.0	Soil Information	5
	Appendix A – HydroCAD Calculations.....	7
	Appendix B – Soils Information	8

1.0 Introduction

Spruhan Engineering, P.C. has prepared this Storm water Report for the proposed development located at 1513-1519 Massachusetts St, Arlington, Massachusetts.

The proposed development consists of a proposed 4 story dwelling, 15 Units, 1 garage and commercial level, and landscaped areas. The purpose of this report is to demonstrate that the proposed conditions do not create any increased flowrate or runoff from the site. This is achieved by installing an infiltration system.

2.0 Existing Conditions

The existing property is located at 1513-1519 Massachusetts St, Arlington, Massachusetts. The site is bounded by residential dwellings on the sides. The property is located in Massachusetts St Between Lancaster Rd and Hilbert St. The existing roof area on the lot is 2039.95 S.F., the existing paved area is 1482.24 S.F., the existing impervious areas are 259.07 S.F., and the existing landscaped areas on the lot are 5,193.74 S.F.

2.1 Existing Topography and Drainage Infrastructure.

In general, the property slopes from the East to the West of the lot ranging between approximately 8.5 %. As there is no drainage system currently installed, all storm water scours across the surface at grade.

3.0 Proposed Conditions

3.1 Project Description

The development consists of a proposed 4 story dwelling, 15 Units, 1 garage and commercial level, and landscaped areas. The total proposed development roof will have an area of 7,485.19 S.F, the unconnected impervious will have an area of 294.16 S.F. and the remaining landscaped portion will have a footprint of 1,195.65 S.F.

3.2 Storm Water Runoff

HydroCAD was used to model the site for the existing and proposed conditions for the 2-year, 10-year, 25-year, and 100-year type III storm events based on Atlas-14 Rain information for Middlesex County Central Area. HydroCAD calculations can be seen in Appendix A. The following table shows a summary of the existing and proposed conditions on the site as they relate to flowrate and volume of storm water runoff for each of the storm events.

3.3 Infiltration system

An infiltration system was proposed to control the runoff rate from the post construction site. This system consists of a total of 10-Stormtech plastic chambers with 0.5 ft crushed stone below and a crush stone system around the Stormtech.

	Summary Table			
	Runoff Flow Rate		Volume of Runoff	
	EXISTING	PROPOSED	EXISTING	PROPOSED
2-Year Storm	0.28 cfs	0.00 cfs	1,006 cfs	12 cfs
10-Year Storm	0.50 cfs	0.01 cfs	1,850 cfs	70 cfs
25-Year Storm	0.69 cfs	0.03 cfs	2,452 cfs	123 cfs
100-Year Storm	1.0 cfs	0.07 cfs	3,454 cfs	222 cfs

4.0 Soil Information

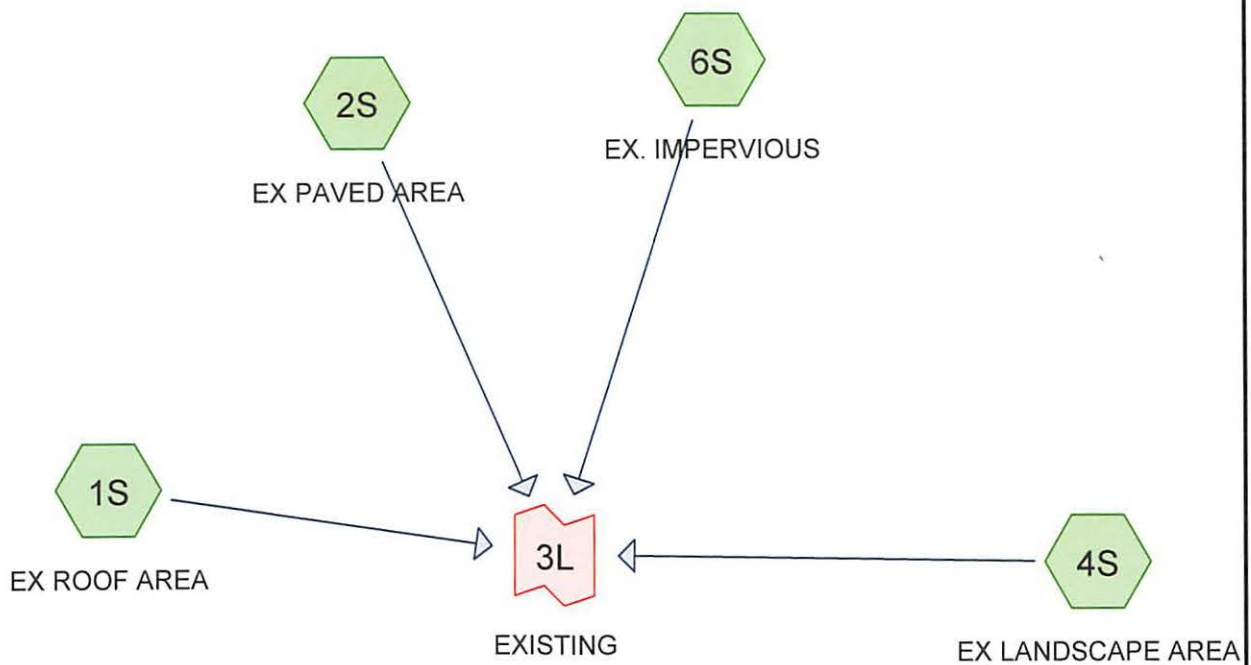
The NRCS Web Soil Survey shows two Map Units inside our area of interest. These are listed next and the percentages of Area of Interest in the Map unit Legend Table:

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
602	Urban land	0.1	38.2%
629C	Canton-Charlton-Urban land complex, 3 to 15 percent slopes	0.2	61.8%
Totals for Area of Interest		0.3	100.0%

Unit 602 and 629C shows Rock outcrop, Ledges, Sandy loam, and similar soils: 602 Shows no soil hydrological group and 629c Shows hydrological group A. however based on the test pit performed on the site, fill, silt load and ledge was found which don't have hydrological group and these properties were used on the HydroCAD model.

This information is shown in Appendix B, in the Map unit descriptions.

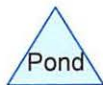
Appendix A – HydroCAD Calculations



Subcat



Reach



Pond



Link

Routing Diagram for EXISTING

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Page 2

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
5,194	49	50-75% Grass cover, Fair, HSG A (4S)
1,635	98	Paved parking, HSG A (2S)
2,040	98	Roofs, HSG A (1S)
106	98	Unconnected pavement, HSG A (6S)
8,975	70	TOTAL AREA

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Page 3

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
8,975	HSG A	1S, 2S, 4S, 6S
0	HSG B	
0	HSG C	
0	HSG D	
0	Other	
8,975		TOTAL AREA

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Page 4

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Sub Nur
5,194	0	0	0	0	5,194	50-75% Grass cover, Fair	
1,635	0	0	0	0	1,635	Paved parking	
2,040	0	0	0	0	2,040	Roofs	
106	0	0	0	0	106	Unconnected pavement	
8,975	0	0	0	0	8,975	TOTAL AREA	

EXISTING

Type III 24-hr 2-Year Rainfall=3.26"

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Page 5

Time span=0.00-30.00 hrs, dt=0.03 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: EX ROOF AREA Runoff Area=2,040 sf 100.00% Impervious Runoff Depth=3.03"
Tc=5.0 min CN=98 Runoff=0.15 cfs 515 cf

Subcatchment2S: EX PAVED AREA Runoff Area=1,635 sf 100.00% Impervious Runoff Depth=3.03"
Tc=5.0 min CN=98 Runoff=0.12 cfs 412 cf

Subcatchment4S: EX LANDSCAPE AREA Runoff Area=5,194 sf 0.00% Impervious Runoff Depth=0.12"
Tc=5.0 min CN=49 Runoff=0.00 cfs 52 cf

Subcatchment6S: EX. IMPERVIOUS Runoff Area=106 sf 100.00% Impervious Runoff Depth=3.03"
Tc=5.0 min CN=98 Runoff=0.01 cfs 27 cf

Link 3L: EXISTING

Inflow=0.28 cfs 1,006 cf
Primary=0.28 cfs 1,006 cf

Total Runoff Area = 8,975 sf Runoff Volume = 1,006 cf Average Runoff Depth = 1.34"
57.87% Pervious = 5,194 sf 42.13% Impervious = 3,781 sf

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Type III 24-hr 2-Year Rainfall=3.26"

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Page 6

Summary for Subcatchment 1S: EX ROOF AREA

Runoff = 0.15 cfs @ 12.07 hrs, Volume= 515 cf, Depth= 3.03"

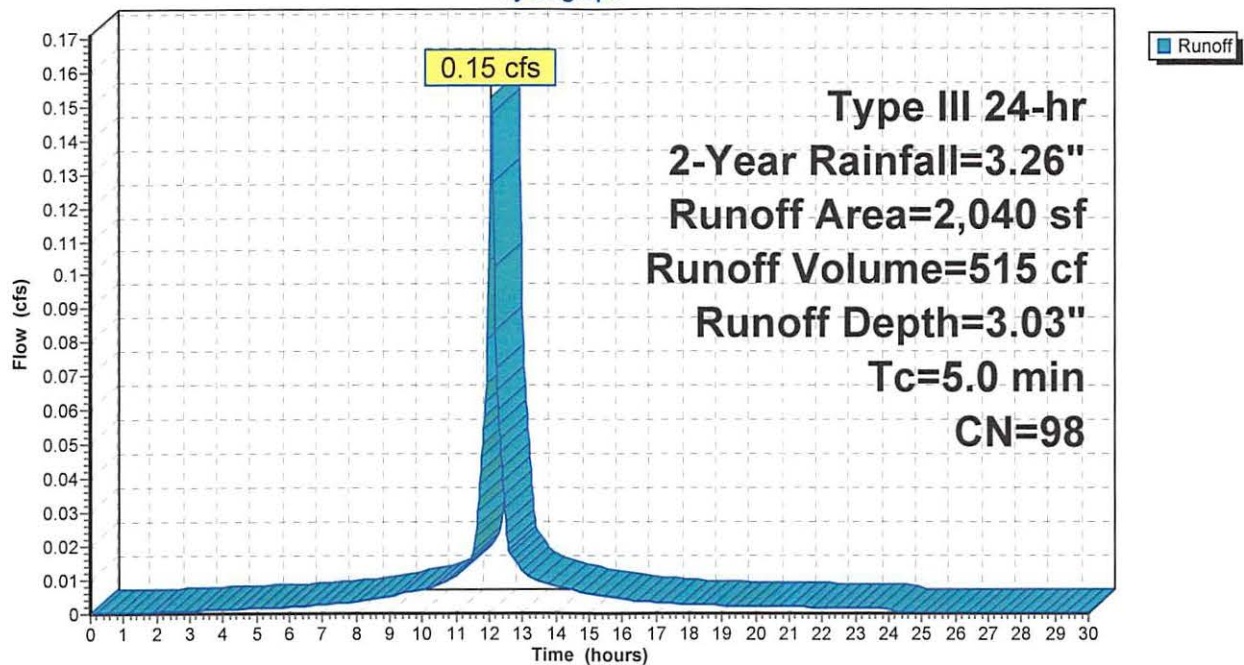
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 2-Year Rainfall=3.26"

Area (sf)	CN	Description
2,040	98	Roofs, HSG A
2,040		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 1S: EX ROOF AREA

Hydrograph



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Type III 24-hr 2-Year Rainfall=3.26"

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Page 7

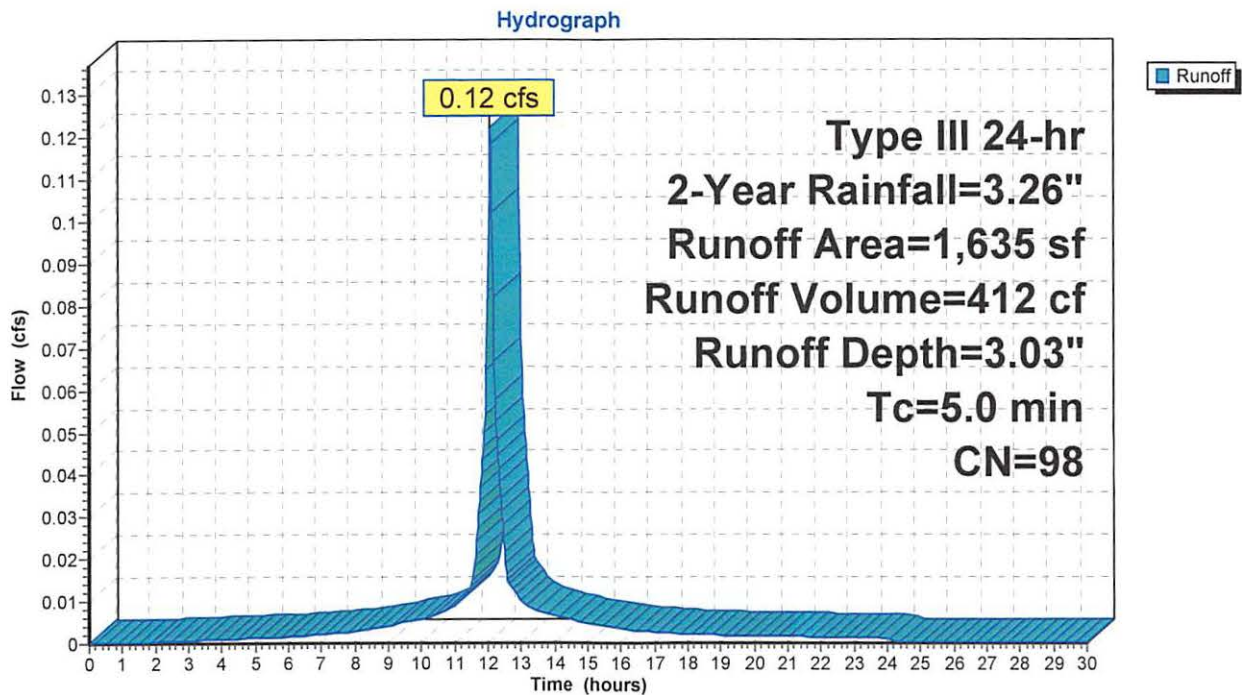
Summary for Subcatchment 2S: EX PAVED AREA

Runoff = 0.12 cfs @ 12.07 hrs, Volume= 412 cf, Depth= 3.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 2-Year Rainfall=3.26"

Area (sf)	CN	Description
1,635	98	Paved parking, HSG A
1,635		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 2S: EX PAVED AREA

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Type III 24-hr 2-Year Rainfall=3.26"

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Page 8

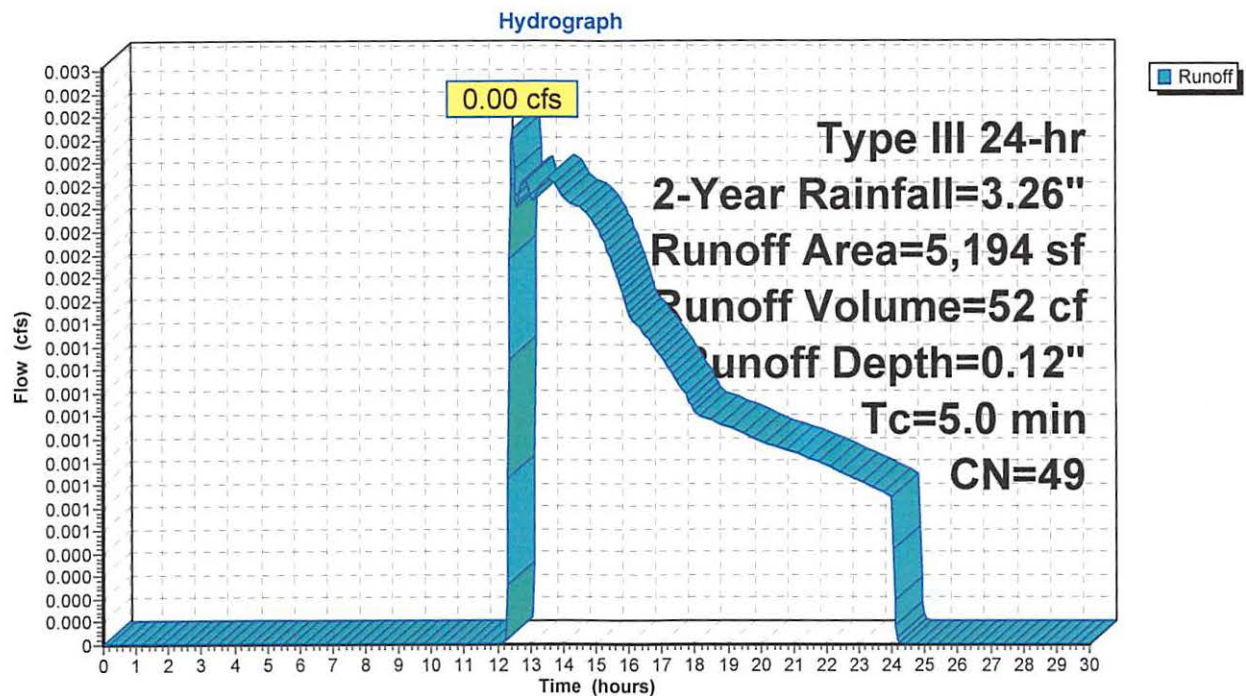
Summary for Subcatchment 4S: EX LANDSCAPE AREA

Runoff = 0.00 cfs @ 12.48 hrs, Volume= 52 cf, Depth= 0.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 2-Year Rainfall=3.26"

Area (sf)	CN	Description
5,194	49	50-75% Grass cover, Fair, HSG A
5,194		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 4S: EX LANDSCAPE AREA

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Type III 24-hr 2-Year Rainfall=3.26"

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Page 9

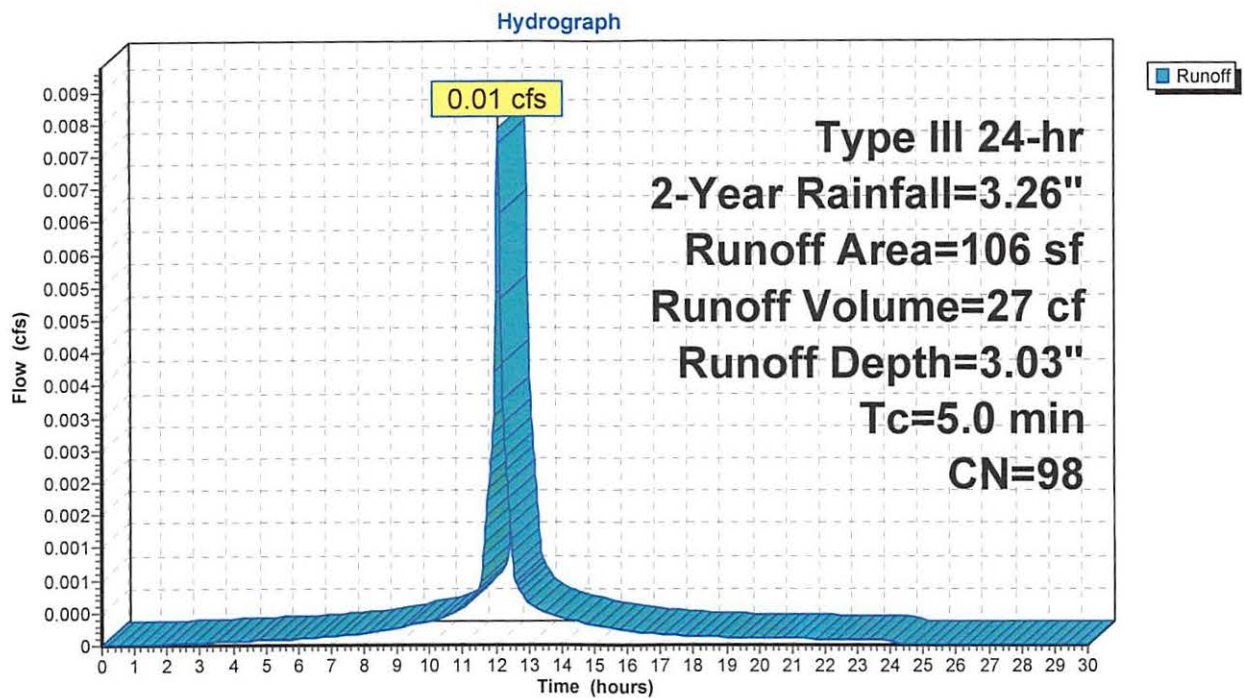
Summary for Subcatchment 6S: EX. IMPERVIOUS

Runoff = 0.01 cfs @ 12.07 hrs, Volume= 27 cf, Depth= 3.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 2-Year Rainfall=3.26"

Area (sf)	CN	Description
106	98	Unconnected pavement, HSG A
106		100.00% Impervious Area
106		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 6S: EX. IMPERVIOUS

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Type III 24-hr 2-Year Rainfall=3.26"

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Page 10

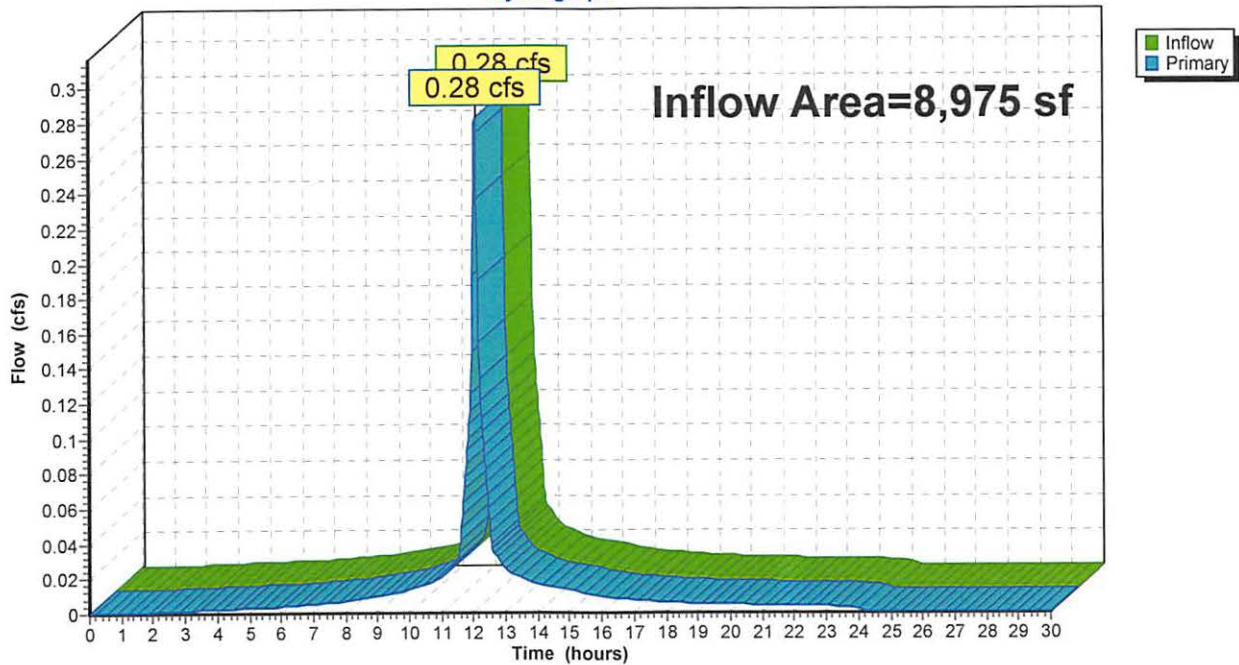
Summary for Link 3L: EXISTING

Inflow Area = 8,975 sf, 42.13% Impervious, Inflow Depth = 1.34" for 2-Year event
Inflow = 0.28 cfs @ 12.07 hrs, Volume= 1,006 cf
Primary = 0.28 cfs @ 12.07 hrs, Volume= 1,006 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Link 3L: EXISTING

Hydrograph



EXISTING*Type III 24-hr 10-Year Rainfall=5.15"*

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Page 11

Time span=0.00-30.00 hrs, dt=0.03 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: EX ROOF AREA Runoff Area=2,040 sf 100.00% Impervious Runoff Depth=4.91"
Tc=5.0 min CN=98 Runoff=0.24 cfs 835 cf

Subcatchment2S: EX PAVED AREA Runoff Area=1,635 sf 100.00% Impervious Runoff Depth=4.91"
Tc=5.0 min CN=98 Runoff=0.19 cfs 669 cf

Subcatchment4S: EX LANDSCAPE AREA Runoff Area=5,194 sf 0.00% Impervious Runoff Depth=0.70"
Tc=5.0 min CN=49 Runoff=0.06 cfs 302 cf

Subcatchment6S: EX. IMPERVIOUS Runoff Area=106 sf 100.00% Impervious Runoff Depth=4.91"
Tc=5.0 min CN=98 Runoff=0.01 cfs 43 cf

Link 3L: EXISTING

Inflow=0.50 cfs 1,850 cf
Primary=0.50 cfs 1,850 cf

Total Runoff Area = 8,975 sf Runoff Volume = 1,850 cf Average Runoff Depth = 2.47"
57.87% Pervious = 5,194 sf 42.13% Impervious = 3,781 sf

EXISTING

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Type III 24-hr 10-Year Rainfall=5.15"

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Page 12

Summary for Subcatchment 1S: EX ROOF AREA

Runoff = 0.24 cfs @ 12.07 hrs, Volume= 835 cf, Depth= 4.91"

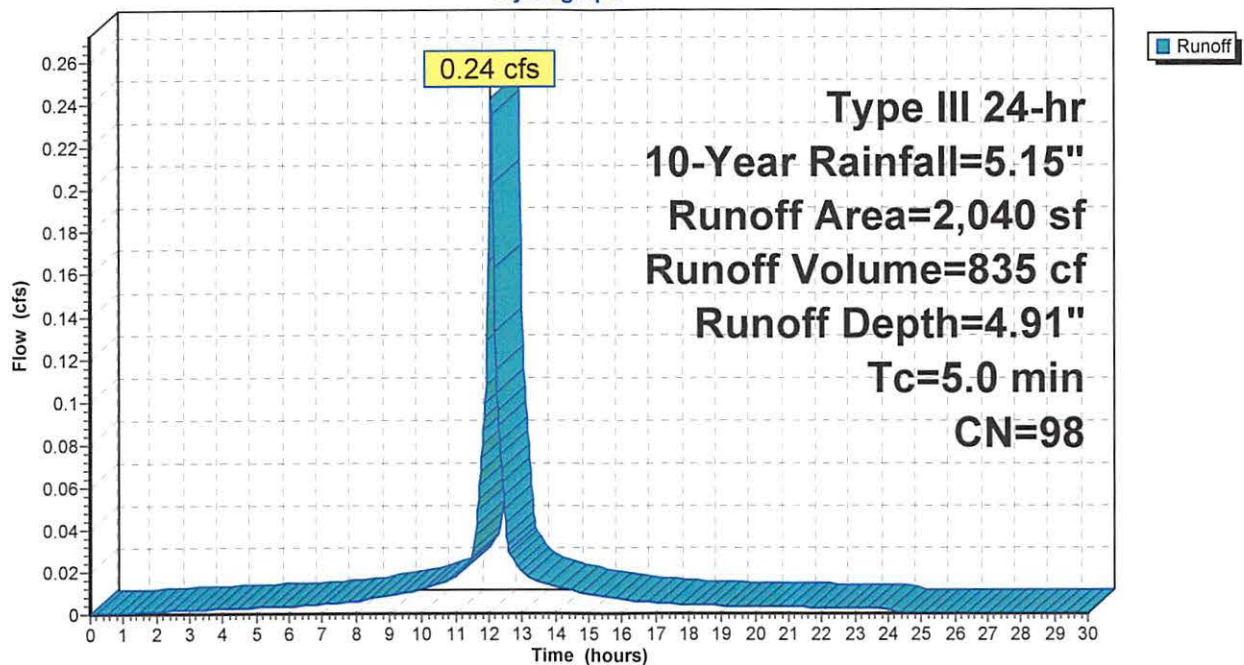
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 10-Year Rainfall=5.15"

Area (sf)	CN	Description
2,040	98	Roofs, HSG A
2,040		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 1S: EX ROOF AREA

Hydrograph



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Type III 24-hr 10-Year Rainfall=5.15"

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Page 13

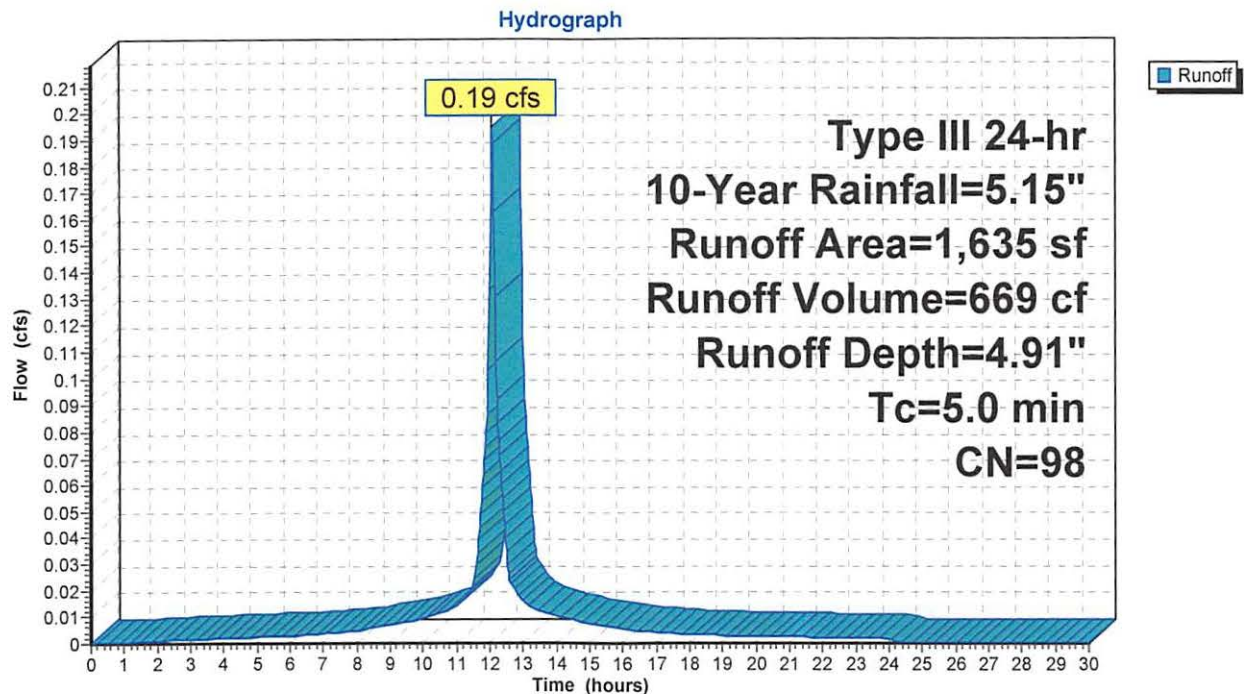
Summary for Subcatchment 2S: EX PAVED AREA

Runoff = 0.19 cfs @ 12.07 hrs, Volume= 669 cf, Depth= 4.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 10-Year Rainfall=5.15"

Area (sf)	CN	Description
1,635	98	Paved parking, HSG A
1,635		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 2S: EX PAVED AREA

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Type III 24-hr 10-Year Rainfall=5.15"

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Page 14

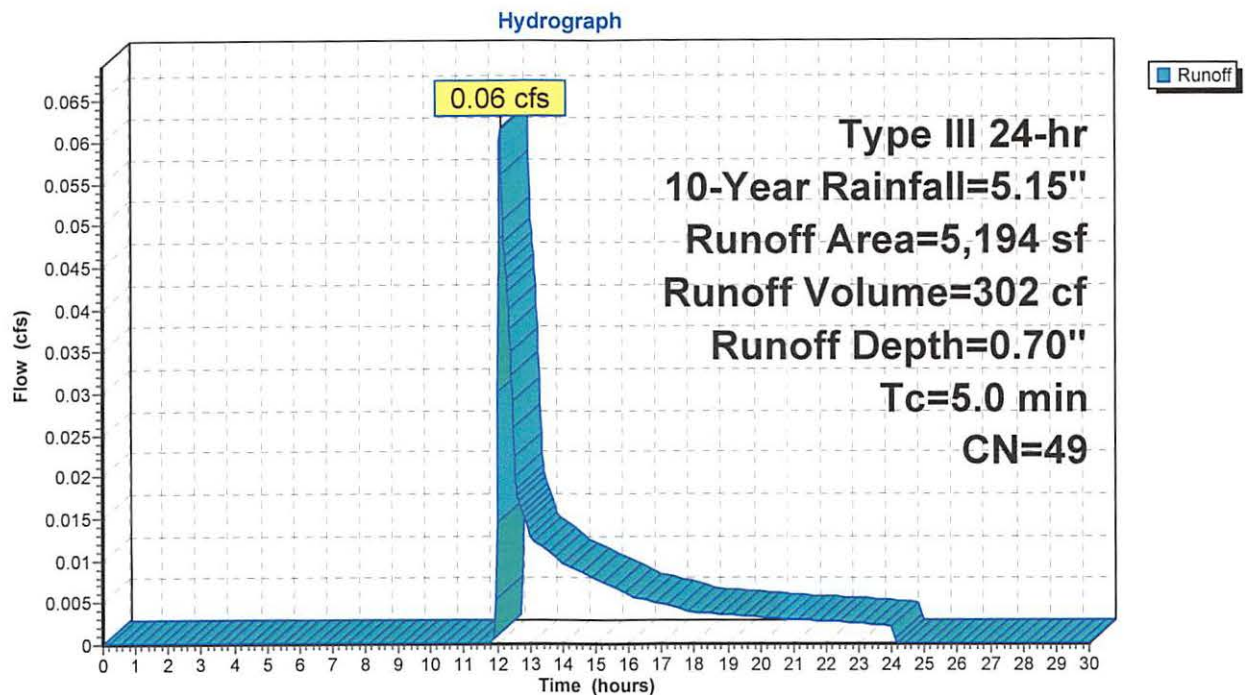
Summary for Subcatchment 4S: EX LANDSCAPE AREA

Runoff = 0.06 cfs @ 12.11 hrs, Volume= 302 cf, Depth= 0.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 10-Year Rainfall=5.15"

Area (sf)	CN	Description
5,194	49	50-75% Grass cover, Fair, HSG A
5,194		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 4S: EX LANDSCAPE AREA

EXISTING

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Type III 24-hr 10-Year Rainfall=5.15"

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Page 15

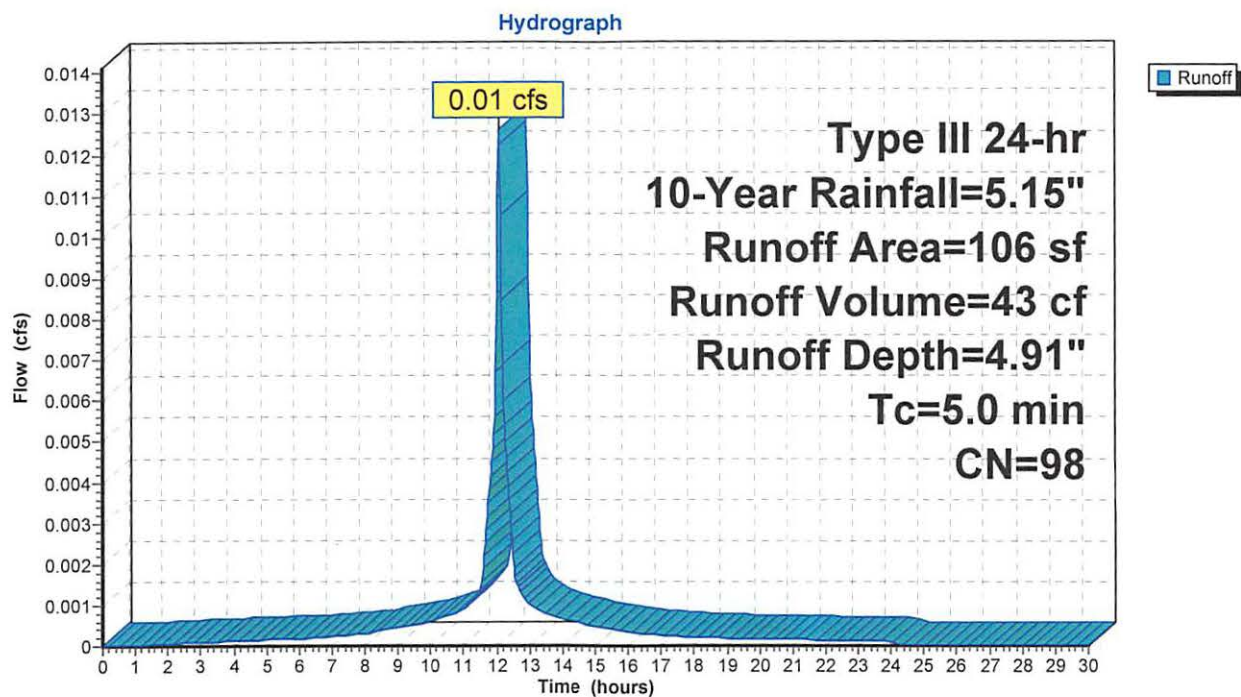
Summary for Subcatchment 6S: EX. IMPERVIOUS

Runoff = 0.01 cfs @ 12.07 hrs, Volume= 43 cf, Depth= 4.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 10-Year Rainfall=5.15"

Area (sf)	CN	Description
106	98	Unconnected pavement, HSG A
106		100.00% Impervious Area
106		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 6S: EX. IMPERVIOUS

EXISTING

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Type III 24-hr 10-Year Rainfall=5.15"

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Page 16

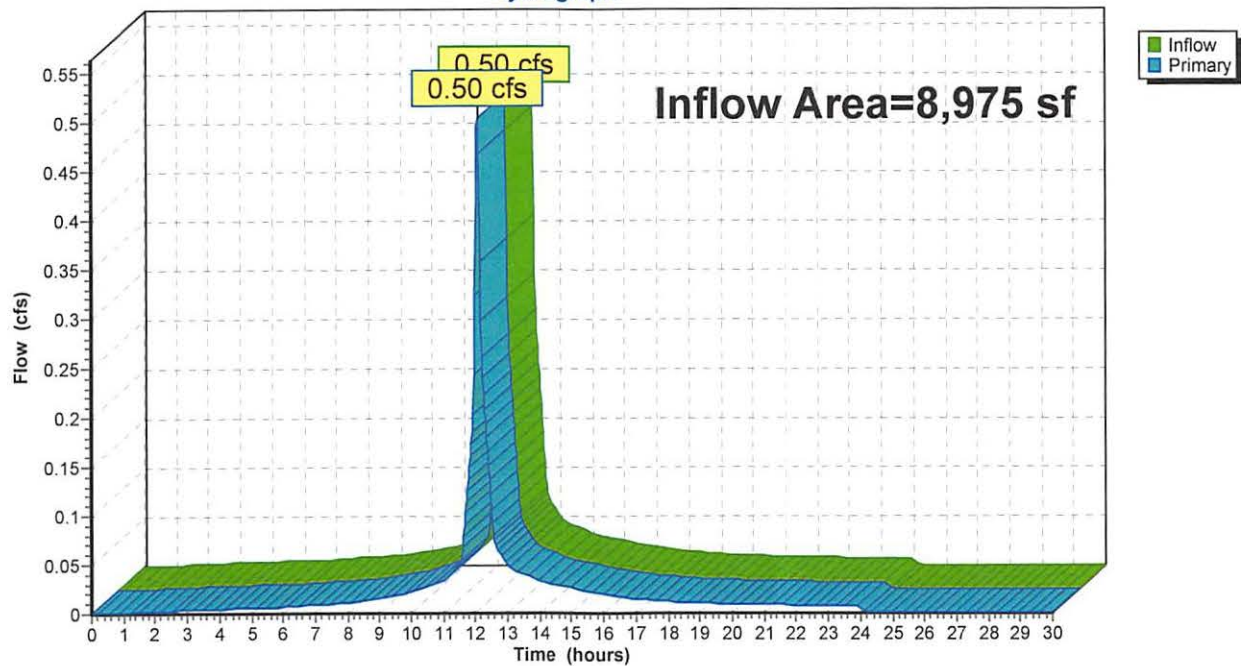
Summary for Link 3L: EXISTING

Inflow Area = 8,975 sf, 42.13% Impervious, Inflow Depth = 2.47" for 10-Year event
Inflow = 0.50 cfs @ 12.08 hrs, Volume= 1,850 cf
Primary = 0.50 cfs @ 12.08 hrs, Volume= 1,850 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Link 3L: EXISTING

Hydrograph



EXISTING

Type III 24-hr 25-Year Rainfall=6.33"

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Page 17

Time span=0.00-30.00 hrs, dt=0.03 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: EX ROOF AREA Runoff Area=2,040 sf 100.00% Impervious Runoff Depth=6.09"
Tc=5.0 min CN=98 Runoff=0.30 cfs 1,036 cf

Subcatchment2S: EX PAVED AREA Runoff Area=1,635 sf 100.00% Impervious Runoff Depth=6.09"
Tc=5.0 min CN=98 Runoff=0.24 cfs 830 cf

Subcatchment4S: EX LANDSCAPE AREA Runoff Area=5,194 sf 0.00% Impervious Runoff Depth=1.23"
Tc=5.0 min CN=49 Runoff=0.14 cfs 533 cf

Subcatchment6S: EX. IMPERVIOUS Runoff Area=106 sf 100.00% Impervious Runoff Depth=6.09"
Tc=5.0 min CN=98 Runoff=0.02 cfs 54 cf

Link 3L: EXISTING

Inflow=0.69 cfs 2,452 cf
Primary=0.69 cfs 2,452 cf

Total Runoff Area = 8,975 sf Runoff Volume = 2,452 cf Average Runoff Depth = 3.28"
57.87% Pervious = 5,194 sf 42.13% Impervious = 3,781 sf

EXISTING

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Type III 24-hr 25-Year Rainfall=6.33"

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Page 18

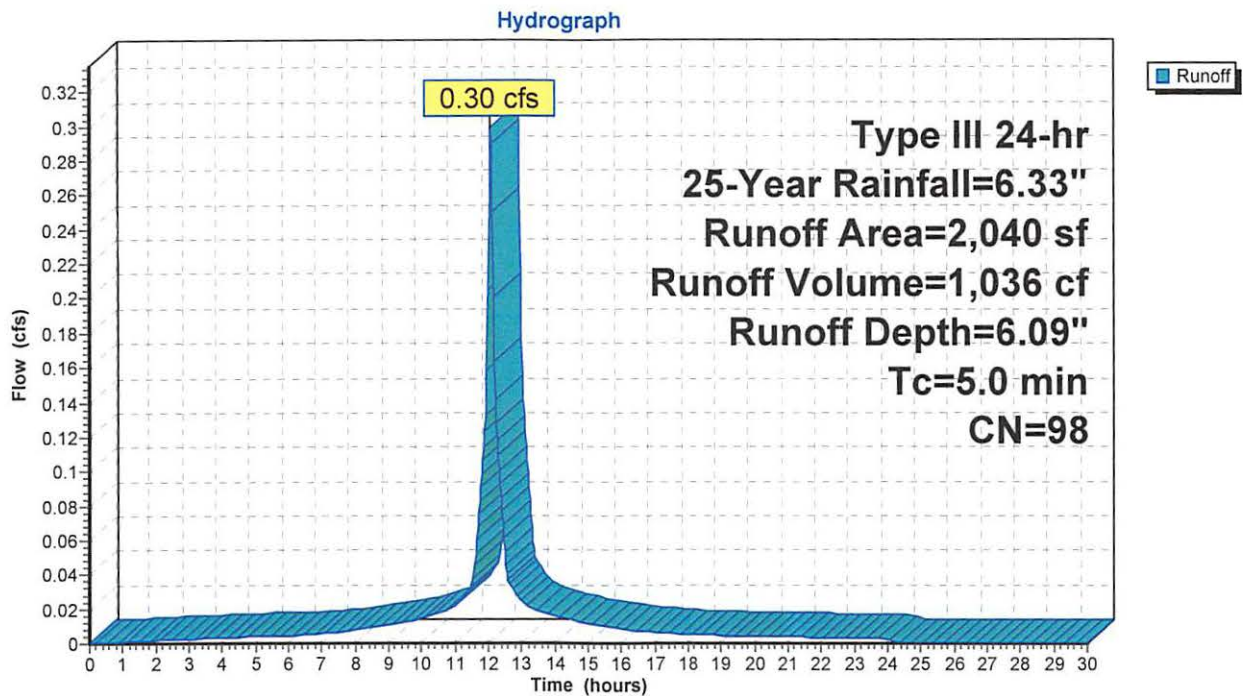
Summary for Subcatchment 1S: EX ROOF AREA

Runoff = 0.30 cfs @ 12.07 hrs, Volume= 1,036 cf, Depth= 6.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 25-Year Rainfall=6.33"

Area (sf)	CN	Description
2,040	98	Roofs, HSG A
2,040		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 1S: EX ROOF AREA

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Type III 24-hr 25-Year Rainfall=6.33"

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Page 19

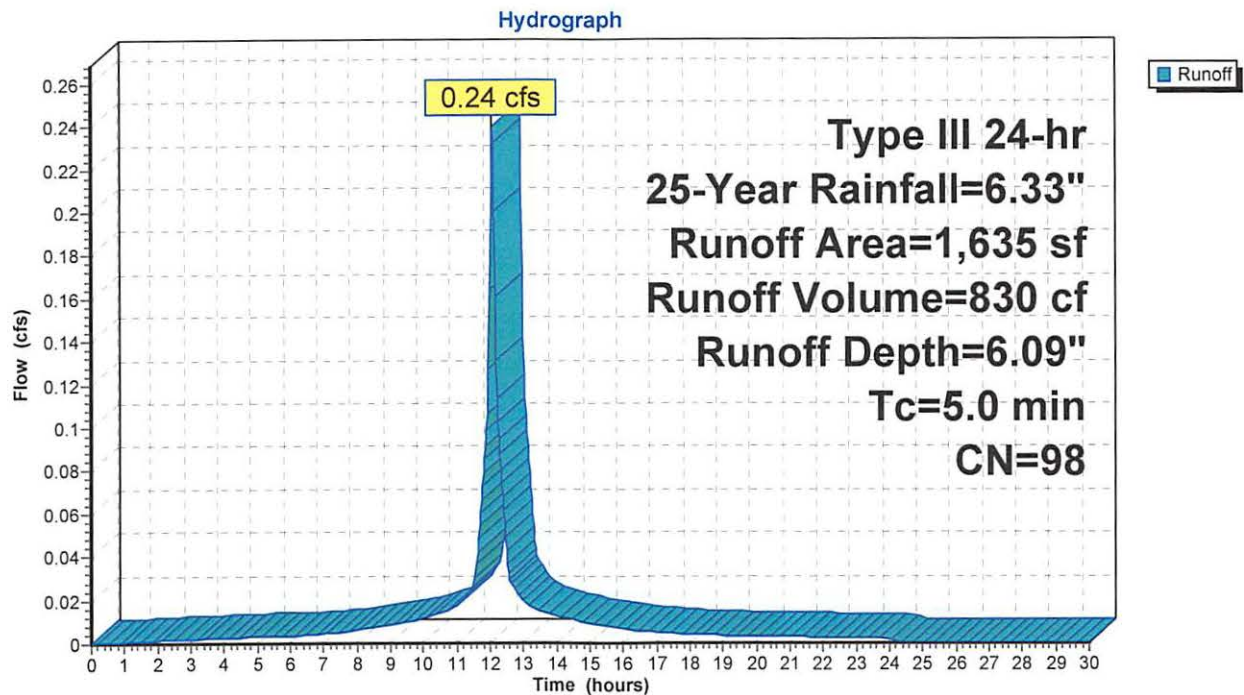
Summary for Subcatchment 2S: EX PAVED AREA

Runoff = 0.24 cfs @ 12.07 hrs, Volume= 830 cf, Depth= 6.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 25-Year Rainfall=6.33"

Area (sf)	CN	Description
1,635	98	Paved parking, HSG A
1,635		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 2S: EX PAVED AREA

Summary for Subcatchment 4S: EX LANDSCAPE AREA

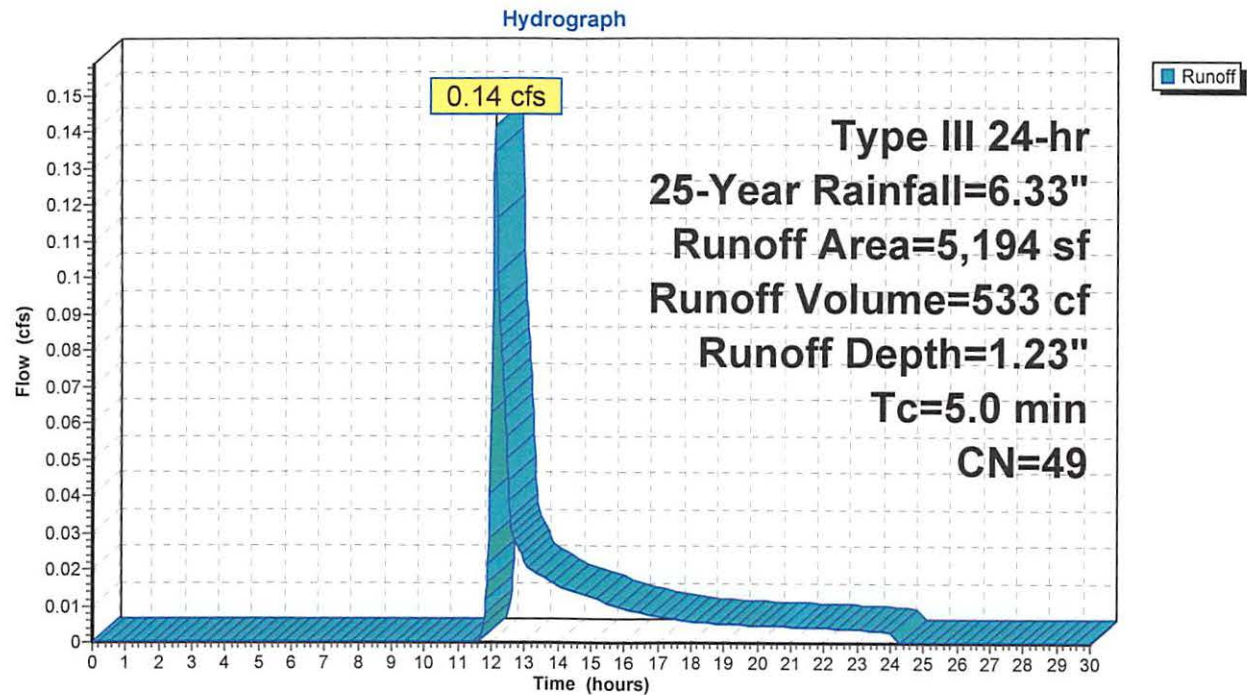
Runoff = 0.14 cfs @ 12.09 hrs, Volume= 533 cf, Depth= 1.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 25-Year Rainfall=6.33"

Area (sf)	CN	Description
5,194	49	50-75% Grass cover, Fair, HSG A
5,194		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 4S: EX LANDSCAPE AREA



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Type III 24-hr 25-Year Rainfall=6.33"

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Page 21

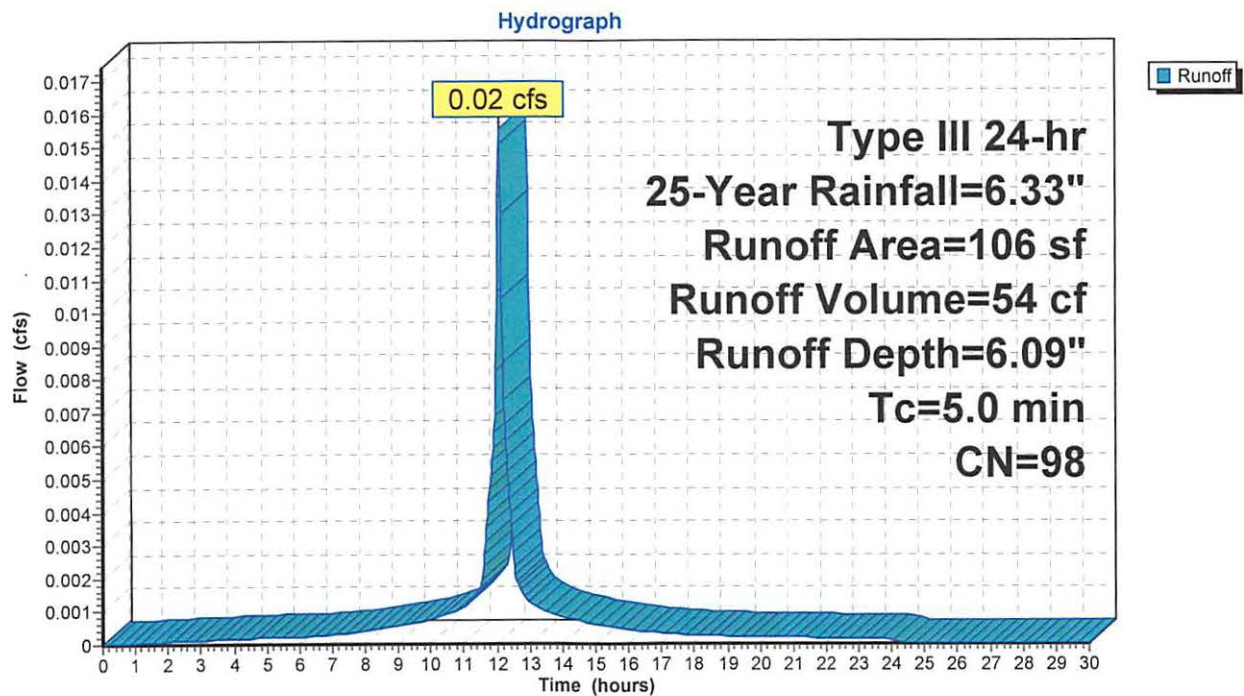
Summary for Subcatchment 6S: EX. IMPERVIOUS

Runoff = 0.02 cfs @ 12.07 hrs, Volume= 54 cf, Depth= 6.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 25-Year Rainfall=6.33"

Area (sf)	CN	Description
106	98	Unconnected pavement, HSG A
106		100.00% Impervious Area
106		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 6S: EX. IMPERVIOUS

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Type III 24-hr 25-Year Rainfall=6.33"

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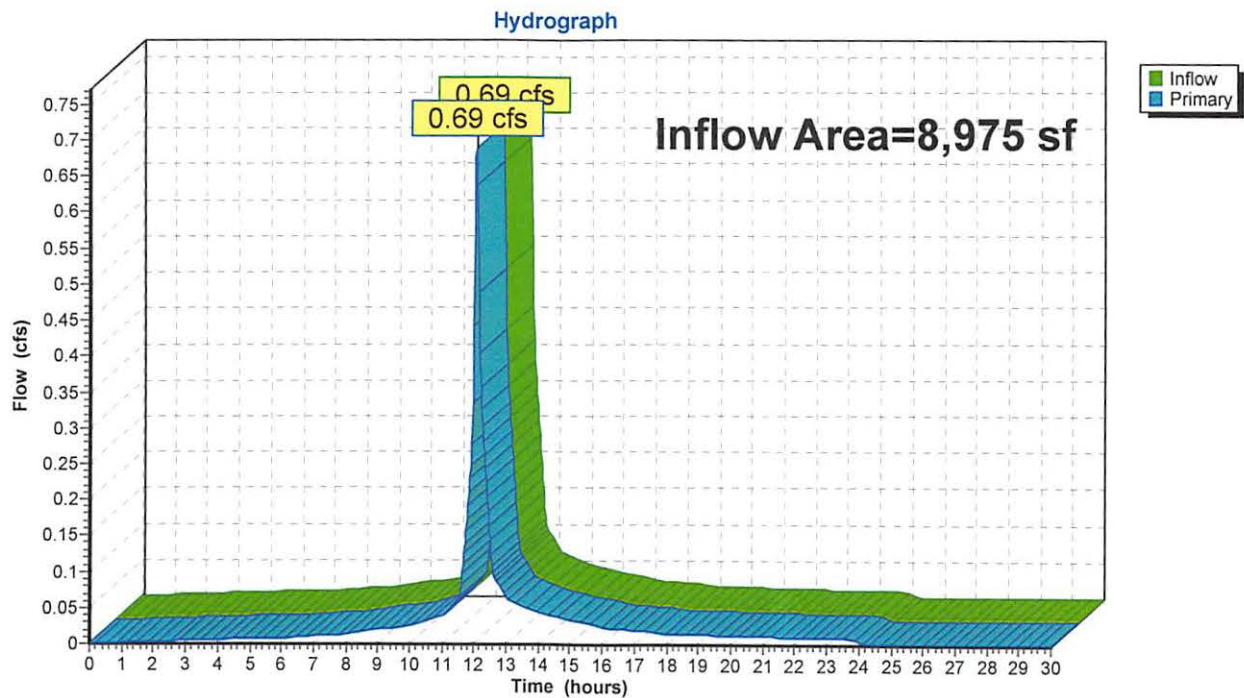
Page 22

Summary for Link 3L: EXISTING

Inflow Area = 8,975 sf, 42.13% Impervious, Inflow Depth = 3.28" for 25-Year event
Inflow = 0.69 cfs @ 12.08 hrs, Volume= 2,452 cf
Primary = 0.69 cfs @ 12.08 hrs, Volume= 2,452 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Link 3L: EXISTING



EXISTING

Type III 24-hr 100-Year Rainfall=8.14"

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Page 23

Time span=0.00-30.00 hrs, dt=0.03 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: EX ROOF AREA Runoff Area=2,040 sf 100.00% Impervious Runoff Depth=7.90"
Tc=5.0 min CN=98 Runoff=0.39 cfs 1,343 cf

Subcatchment2S: EX PAVED AREA Runoff Area=1,635 sf 100.00% Impervious Runoff Depth=7.90"
Tc=5.0 min CN=98 Runoff=0.31 cfs 1,076 cf

Subcatchment4S: EX LANDSCAPE AREA Runoff Area=5,194 sf 0.00% Impervious Runoff Depth=2.23"
Tc=5.0 min CN=49 Runoff=0.29 cfs 965 cf

Subcatchment6S: EX. IMPERVIOUS Runoff Area=106 sf 100.00% Impervious Runoff Depth=7.90"
Tc=5.0 min CN=98 Runoff=0.02 cfs 70 cf

Link 3L: EXISTING

Inflow=1.00 cfs 3,454 cf
Primary=1.00 cfs 3,454 cf

Total Runoff Area = 8,975 sf Runoff Volume = 3,454 cf Average Runoff Depth = 4.62"
57.87% Pervious = 5,194 sf 42.13% Impervious = 3,781 sf

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Type III 24-hr 100-Year Rainfall=8.14"

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Page 24

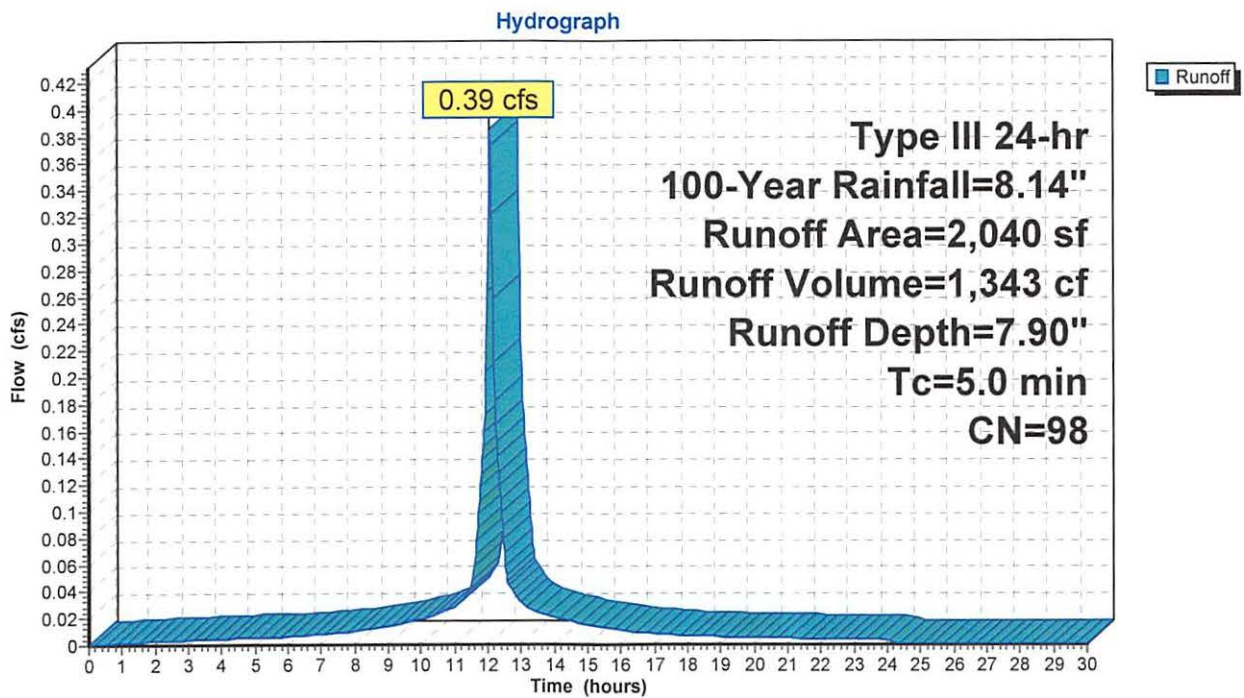
Summary for Subcatchment 1S: EX ROOF AREA

Runoff = 0.39 cfs @ 12.07 hrs, Volume= 1,343 cf, Depth= 7.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 100-Year Rainfall=8.14"

Area (sf)	CN	Description
2,040	98	Roofs, HSG A
2,040		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 1S: EX ROOF AREA

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Type III 24-hr 100-Year Rainfall=8.14"

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Page 25

Summary for Subcatchment 2S: EX PAVED AREA

Runoff = 0.31 cfs @ 12.07 hrs, Volume= 1,076 cf, Depth= 7.90"

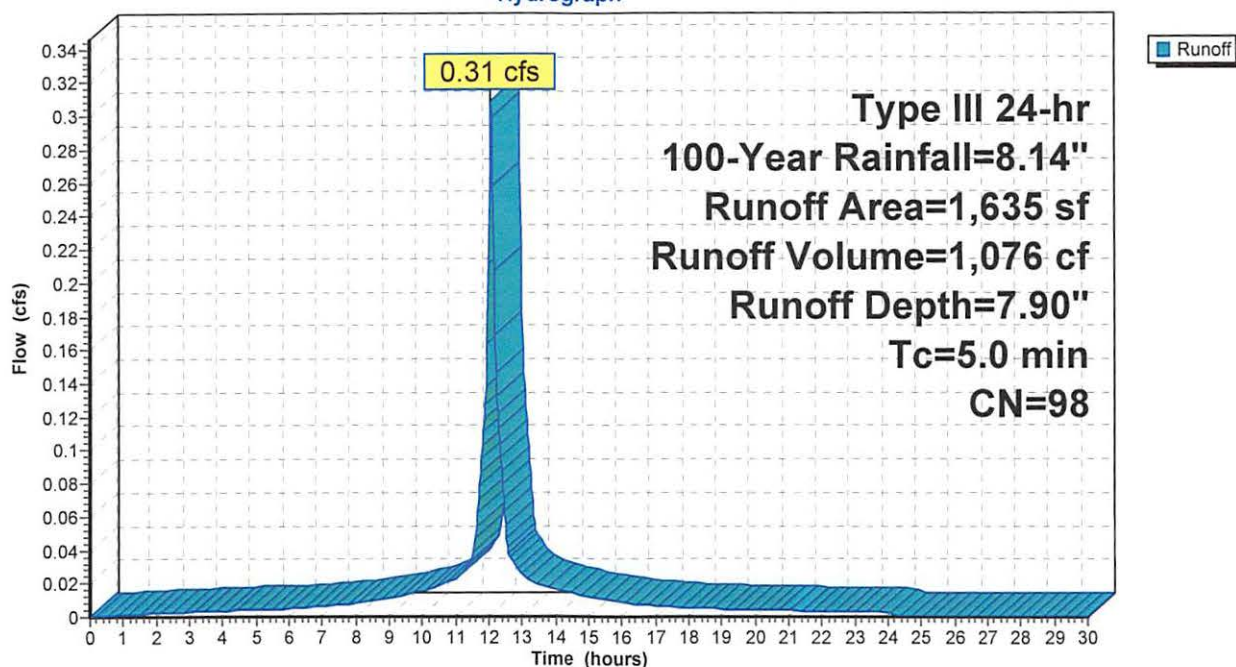
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 100-Year Rainfall=8.14"

Area (sf)	CN	Description
1,635	98	Paved parking, HSG A
1,635		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 2S: EX PAVED AREA

Hydrograph



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Type III 24-hr 100-Year Rainfall=8.14"

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Page 26

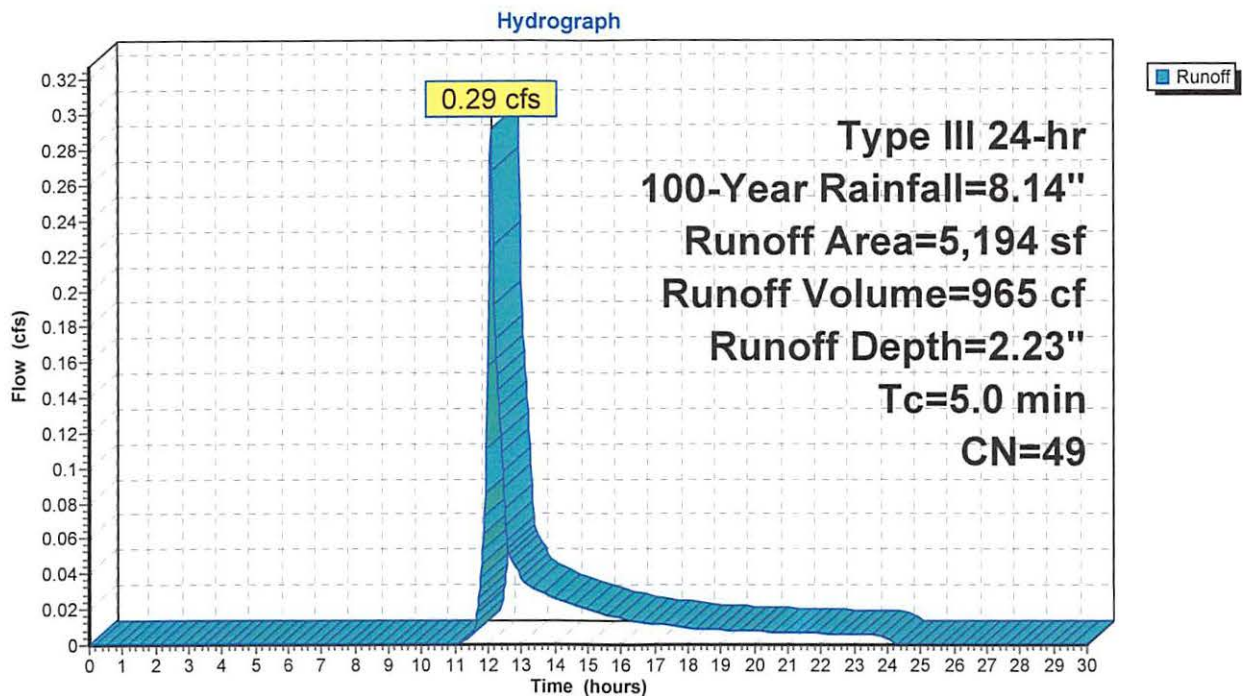
Summary for Subcatchment 4S: EX LANDSCAPE AREA

Runoff = 0.29 cfs @ 12.09 hrs, Volume= 965 cf, Depth= 2.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 100-Year Rainfall=8.14"

Area (sf)	CN	Description
5,194	49	50-75% Grass cover, Fair, HSG A
5,194		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 4S: EX LANDSCAPE AREA

EXISTING

Type III 24-hr 100-Year Rainfall=8.14"

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Page 27

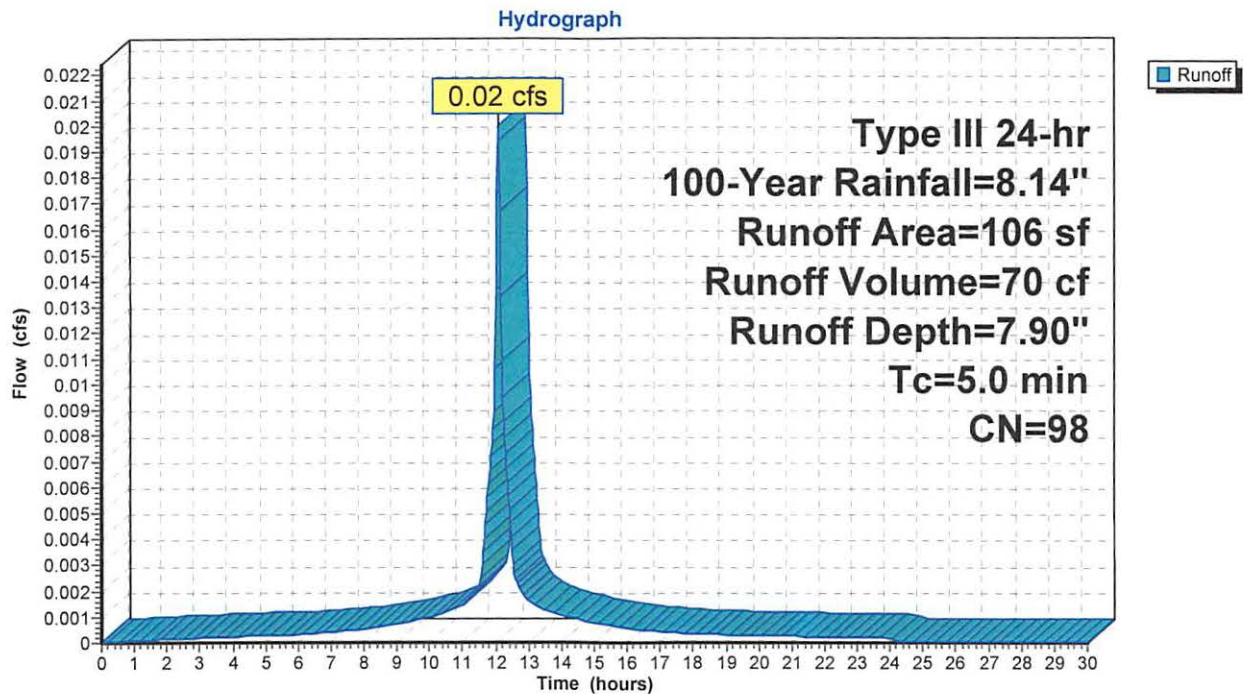
Summary for Subcatchment 6S: EX. IMPERVIOUS

Runoff = 0.02 cfs @ 12.07 hrs, Volume= 70 cf, Depth= 7.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 100-Year Rainfall=8.14"

Area (sf)	CN	Description
106	98	Unconnected pavement, HSG A
106		100.00% Impervious Area
106		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 6S: EX. IMPERVIOUS

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Type III 24-hr 100-Year Rainfall=8.14"

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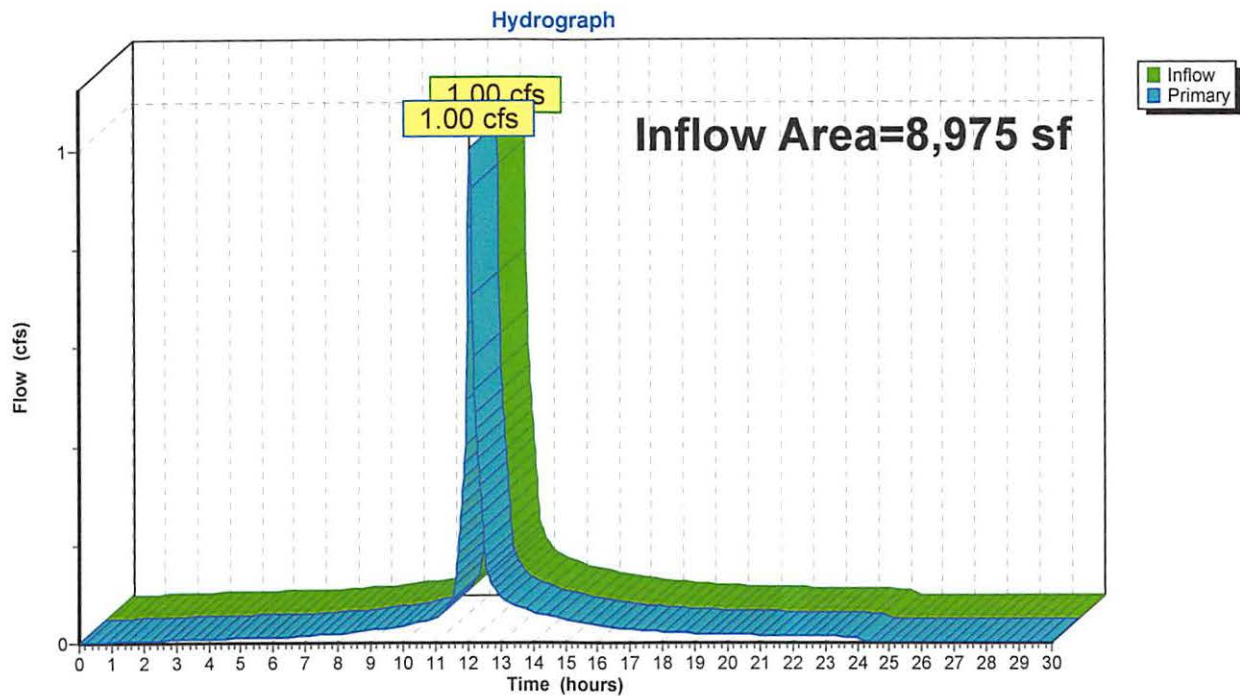
Page 28

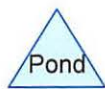
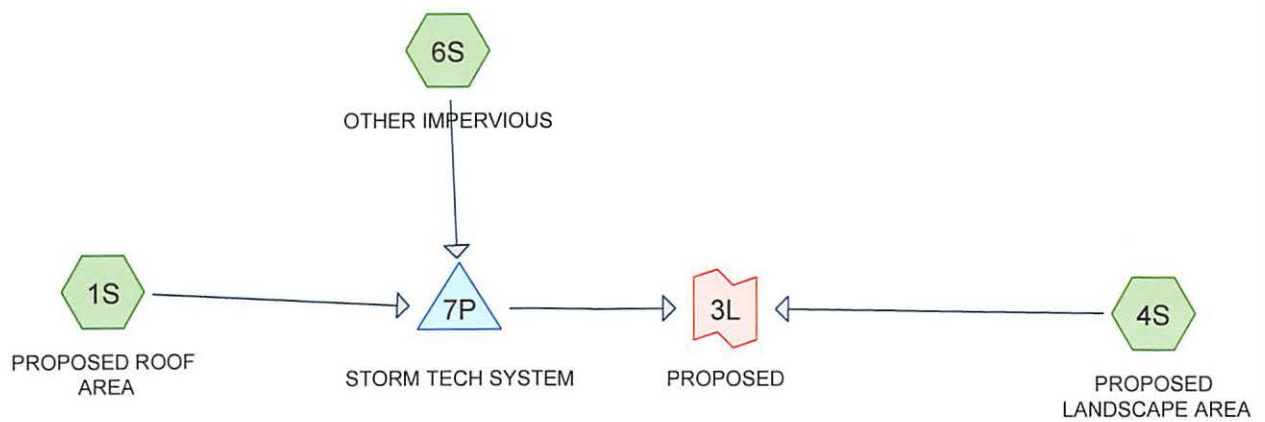
Summary for Link 3L: EXISTING

Inflow Area = 8,975 sf, 42.13% Impervious, Inflow Depth = 4.62" for 100-Year event
Inflow = 1.00 cfs @ 12.07 hrs, Volume= 3,454 cf
Primary = 1.00 cfs @ 12.07 hrs, Volume= 3,454 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Link 3L: EXISTING





Routing Diagram for PROPOSED - Copy
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Page 2

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
1,196	49	50-75% Grass cover, Fair, HSG A (4S)
7,485	98	Roofs, HSG A (1S)
294	98	Unconnected pavement, HSG A (6S)
8,975	91	TOTAL AREA

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Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
8,975	HSG A	1S, 4S, 6S
0	HSG B	
0	HSG C	
0	HSG D	
0	Other	
8,975		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Sut Nur
1,196	0	0	0	0	1,196	50-75% Grass cover, Fair	
7,485	0	0	0	0	7,485	Roofs	
294	0	0	0	0	294	Unconnected pavement	
8,975	0	0	0	0	8,975	TOTAL AREA	

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Type III 24-hr 2-Year Rainfall=3.26"

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Time span=0.00-30.00 hrs, dt=0.03 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: PROPOSED ROOF Runoff Area=7,485 sf 100.00% Impervious Runoff Depth=3.03"
Tc=5.0 min CN=98 Runoff=0.56 cfs 1,888 cf

Subcatchment4S: PROPOSED LANDSCAPE Runoff Area=1,196 sf 0.00% Impervious Runoff Depth=0.12"
Tc=5.0 min CN=49 Runoff=0.00 cfs 12 cf

Subcatchment6S: OTHER IMPERVIOUS Runoff Area=294 sf 100.00% Impervious Runoff Depth=3.03"
Tc=5.0 min CN=98 Runoff=0.02 cfs 74 cf

Pond 7P: STORM TECH SYSTEM Peak Elev=167.26' Storage=855 cf Inflow=0.58 cfs 1,962 cf
Discarded=0.03 cfs 1,962 cf Primary=0.00 cfs 0 cf Outflow=0.03 cfs 1,962 cf

Link 3L: PROPOSED Inflow=0.00 cfs 12 cf
Primary=0.00 cfs 12 cf

Total Runoff Area = 8,975 sf Runoff Volume = 1,974 cf Average Runoff Depth = 2.64"
13.33% Pervious = 1,196 sf 86.67% Impervious = 7,779 sf

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Type III 24-hr 2-Year Rainfall=3.26"

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Page 6

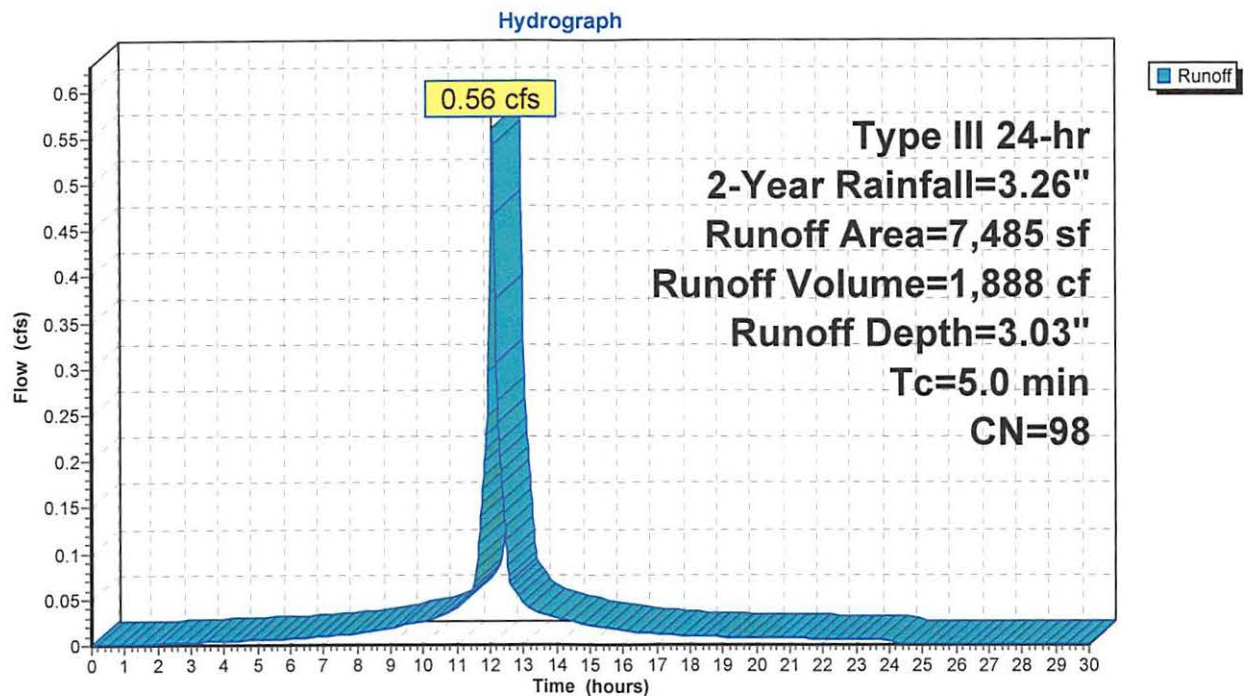
Summary for Subcatchment 1S: PROPOSED ROOF AREA

Runoff = 0.56 cfs @ 12.07 hrs, Volume= 1,888 cf, Depth= 3.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 2-Year Rainfall=3.26"

Area (sf)	CN	Description
7,485	98	Roofs, HSG A
7,485		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 1S: PROPOSED ROOF AREA

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Type III 24-hr 2-Year Rainfall=3.26"

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Page 7

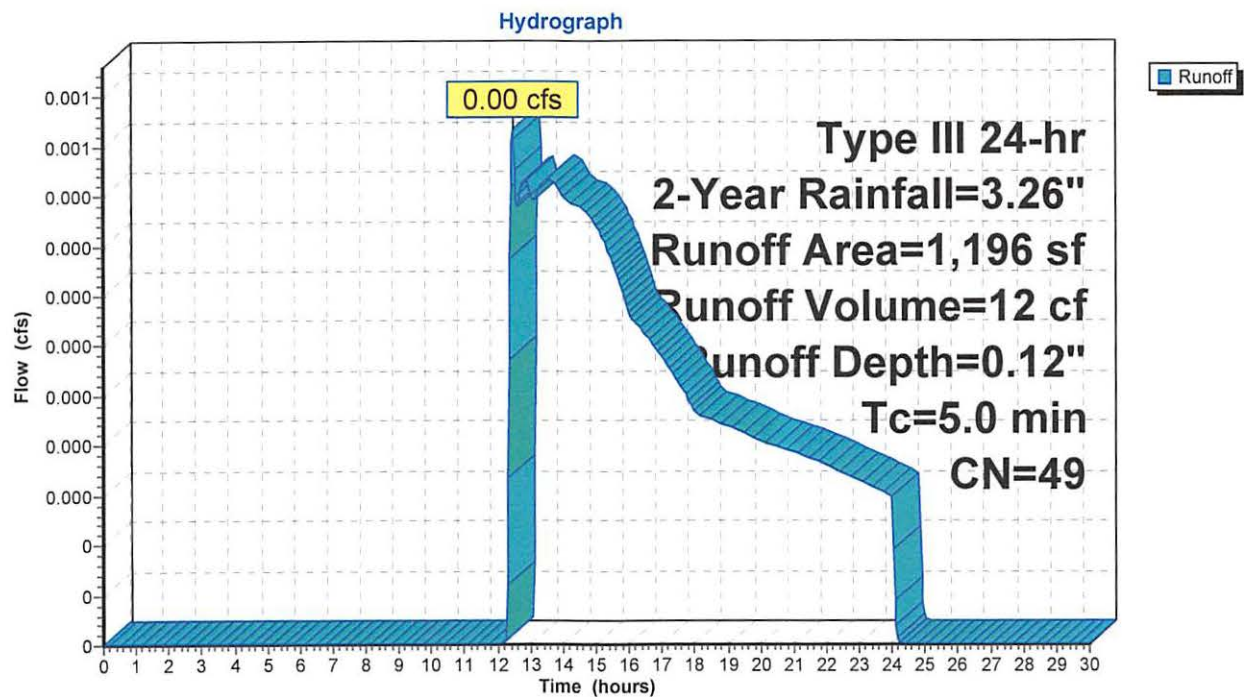
Summary for Subcatchment 4S: PROPOSED LANDSCAPE AREA

Runoff = 0.00 cfs @ 12.48 hrs, Volume= 12 cf, Depth= 0.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 2-Year Rainfall=3.26"

Area (sf)	CN	Description
1,196	49	50-75% Grass cover, Fair, HSG A
1,196		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 4S: PROPOSED LANDSCAPE AREA

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Type III 24-hr 2-Year Rainfall=3.26"

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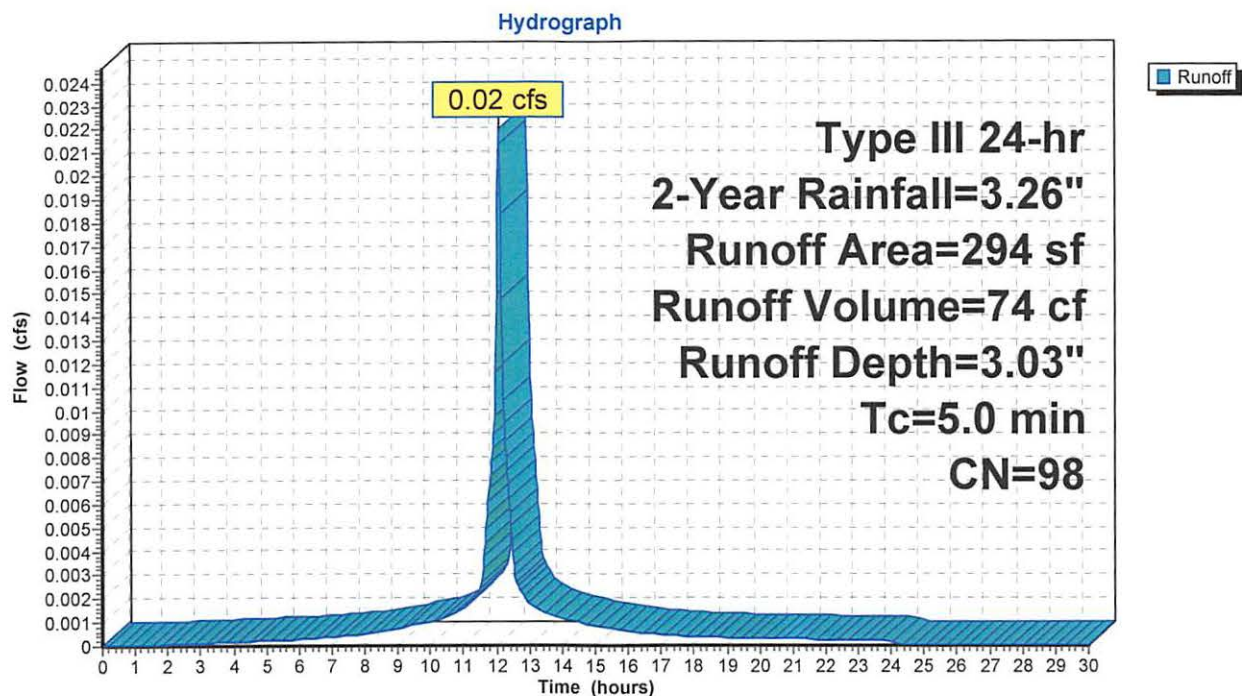
Summary for Subcatchment 6S: OTHER IMPERVIOUS

Runoff = 0.02 cfs @ 12.07 hrs, Volume= 74 cf, Depth= 3.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 2-Year Rainfall=3.26"

Area (sf)	CN	Description
294	98	Unconnected pavement, HSG A
294		100.00% Impervious Area
294		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 6S: OTHER IMPERVIOUS

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Type III 24-hr 2-Year Rainfall=3.26"

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Page 9

Summary for Pond 7P: STORM TECH SYSTEM

Inflow Area = 7,779 sf, 100.00% Impervious, Inflow Depth = 3.03" for 2-Year event
 Inflow = 0.58 cfs @ 12.07 hrs, Volume= 1,962 cf
 Outflow = 0.03 cfs @ 10.62 hrs, Volume= 1,962 cf, Atten= 94%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 10.62 hrs, Volume= 1,962 cf
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
 Peak Elev= 167.26' @ 13.81 hrs Surf.Area= 1,371 sf Storage= 855 cf

Plug-Flow detention time= 217.4 min calculated for 1,960 cf (100% of inflow)
 Center-of-Mass det. time= 217.3 min (972.4 - 755.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	166.40'	646 cf	20.92'W x 32.10'L x 3.50'H Field A 2,350 cf Overall - 735 cf Embedded = 1,615 cf x 40.0% Voids
#2A	166.90'	735 cf	ADS StormTech SC-740 +Cap x 16 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 16 Chambers in 4 Rows
#3	166.50'	2,030 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
		3,411 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
166.50	700	0	0
169.40	700	2,030	2,030

Device	Routing	Invert	Outlet Devices
#1	Discarded	166.40'	1.020 in/hr Exfiltration over Surface area
#2	Primary	169.50'	6.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.03 cfs @ 10.62 hrs HW=166.50' (Free Discharge)
 ↳ **1=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=166.40' (Free Discharge)
 ↳ **2=Orifice/Grate** (Controls 0.00 cfs)

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Type III 24-hr 2-Year Rainfall=3.26"

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Page 10

Pond 7P: STORM TECH SYSTEM - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)

Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf

Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 5.0" Spacing = 56.0" C-C Row Spacing

4 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 30.10' Row Length +12.0" End Stone x 2 = 32.10' Base Length

4 Rows x 51.0" Wide + 5.0" Spacing x 3 + 16.0" Side Stone x 2 = 20.92' Base Width

6.0" Base + 30.0" Chamber Height + 6.0" Cover = 3.50' Field Height

16 Chambers x 45.9 cf = 735.0 cf Chamber Storage

2,349.7 cf Field - 735.0 cf Chambers = 1,614.7 cf Stone x 40.0% Voids = 645.9 cf Stone Storage

Chamber Storage + Stone Storage = 1,380.9 cf = 0.032 af

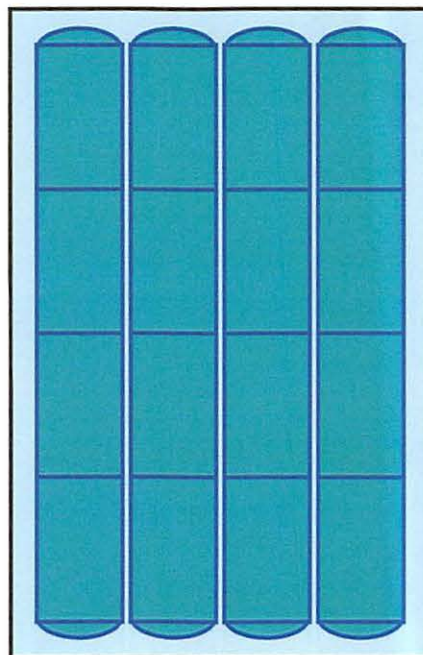
Overall Storage Efficiency = 58.8%

Overall System Size = 32.10' x 20.92' x 3.50'

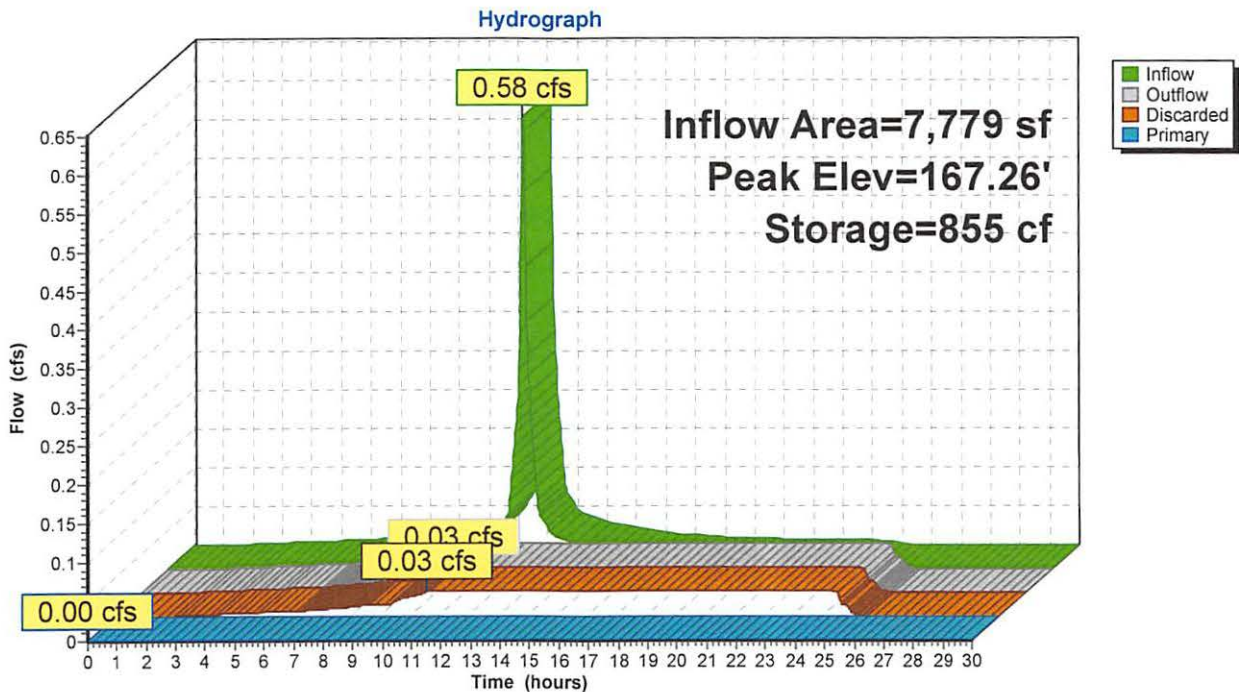
16 Chambers

87.0 cy Field

59.8 cy Stone



Pond 7P: STORM TECH SYSTEM



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Type III 24-hr 2-Year Rainfall=3.26"

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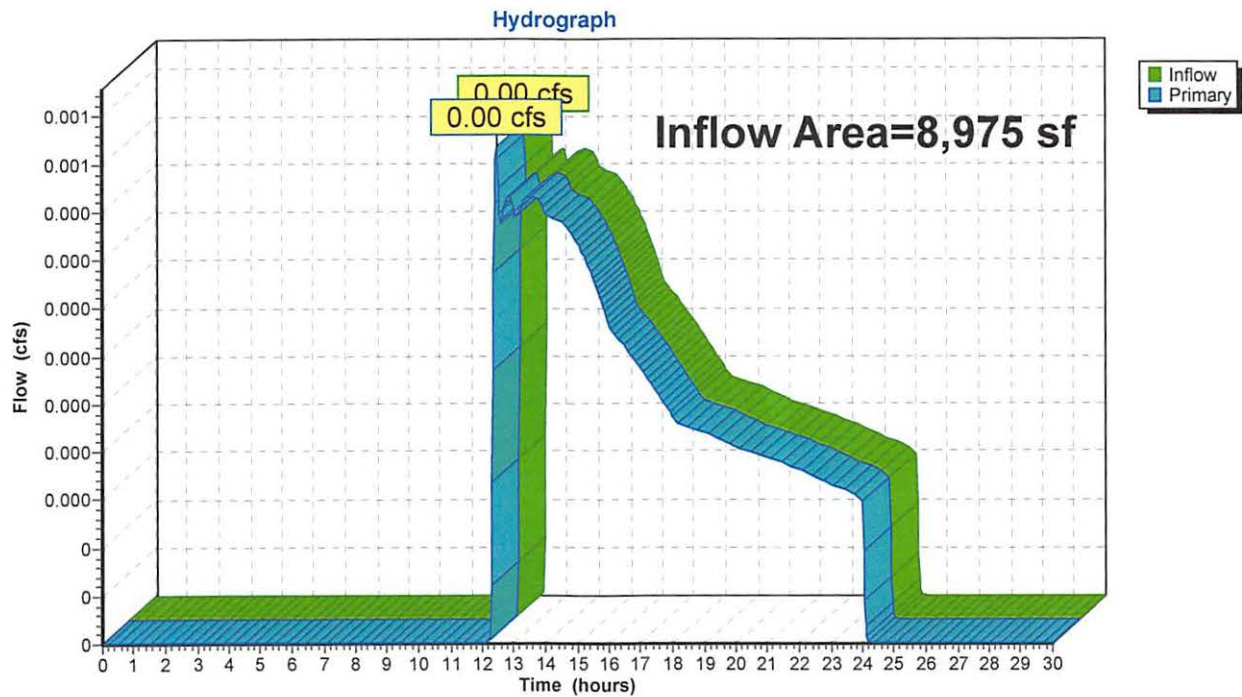
Page 12

Summary for Link 3L: PROPOSED

Inflow Area = 8,975 sf, 86.67% Impervious, Inflow Depth = 0.02" for 2-Year event
Inflow = 0.00 cfs @ 12.48 hrs, Volume= 12 cf
Primary = 0.00 cfs @ 12.48 hrs, Volume= 12 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Link 3L: PROPOSED



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Type III 24-hr 10-Year Rainfall=5.15"

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Time span=0.00-30.00 hrs, dt=0.03 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: PROPOSED ROOF Runoff Area=7,485 sf 100.00% Impervious Runoff Depth=4.91"
Tc=5.0 min CN=98 Runoff=0.89 cfs 3,064 cf

Subcatchment4S: PROPOSED LANDSCAPE Runoff Area=1,196 sf 0.00% Impervious Runoff Depth=0.70"
Tc=5.0 min CN=49 Runoff=0.01 cfs 70 cf

Subcatchment6S: OTHER IMPERVIOUS Runoff Area=294 sf 100.00% Impervious Runoff Depth=4.91"
Tc=5.0 min CN=98 Runoff=0.04 cfs 120 cf

Pond 7P: STORM TECH SYSTEM Peak Elev=167.94' Storage=1,670 cf Inflow=0.93 cfs 3,185 cf
Discarded=0.03 cfs 2,771 cf Primary=0.00 cfs 0 cf Outflow=0.03 cfs 2,771 cf

Link 3L: PROPOSED

Inflow=0.01 cfs 70 cf
Primary=0.01 cfs 70 cf

Total Runoff Area = 8,975 sf Runoff Volume = 3,254 cf Average Runoff Depth = 4.35"
13.33% Pervious = 1,196 sf 86.67% Impervious = 7,779 sf

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Type III 24-hr 10-Year Rainfall=5.15"

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Page 14

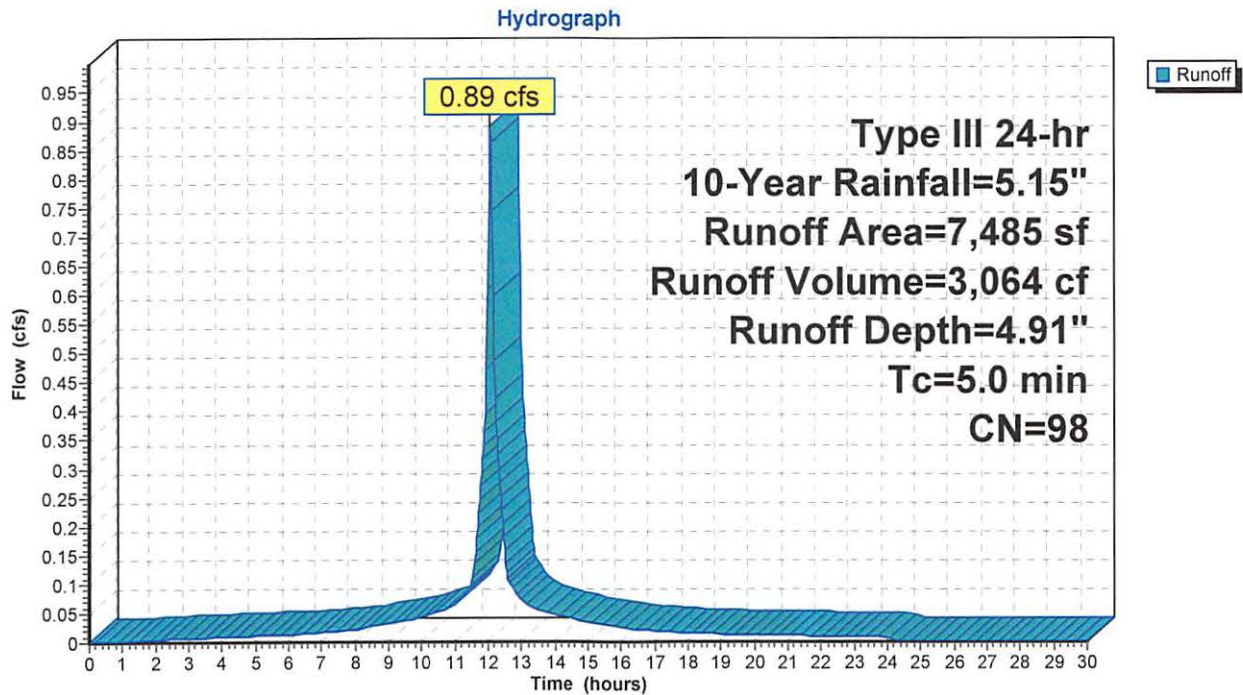
Summary for Subcatchment 1S: PROPOSED ROOF AREA

Runoff = 0.89 cfs @ 12.07 hrs, Volume= 3,064 cf, Depth= 4.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 10-Year Rainfall=5.15"

Area (sf)	CN	Description
7,485	98	Roofs, HSG A
7,485		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 1S: PROPOSED ROOF AREA

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Type III 24-hr 10-Year Rainfall=5.15"

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Page 15

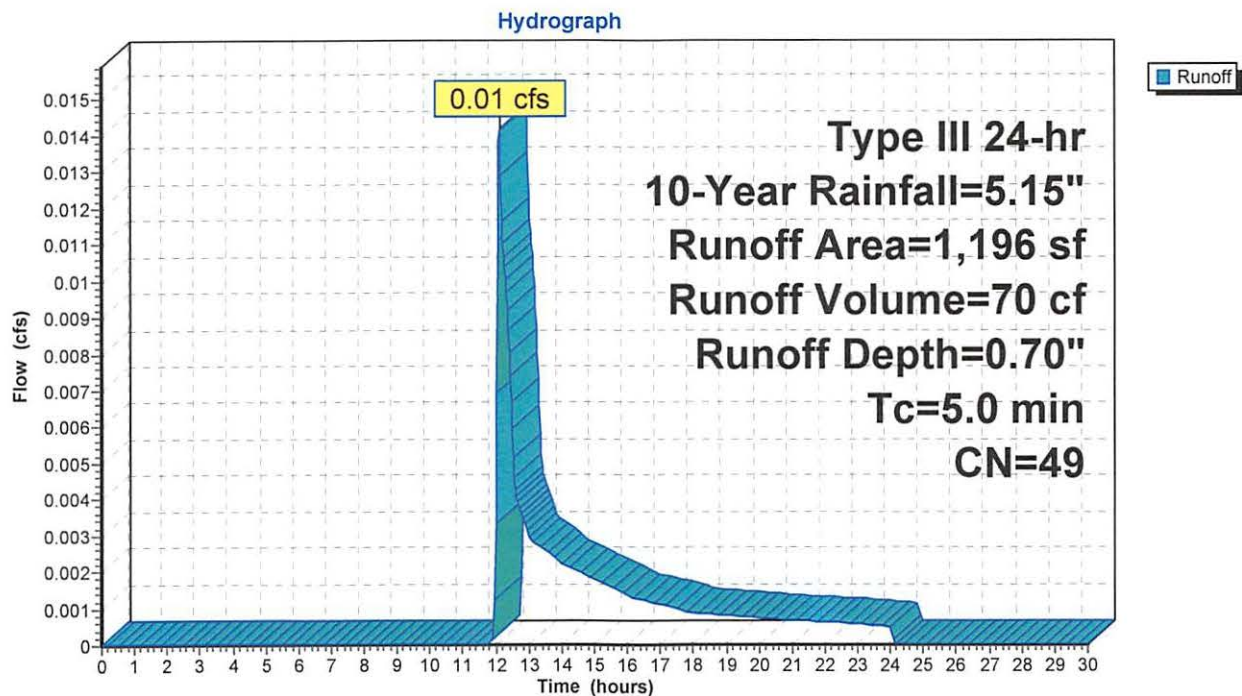
Summary for Subcatchment 4S: PROPOSED LANDSCAPE AREA

Runoff = 0.01 cfs @ 12.11 hrs, Volume= 70 cf, Depth= 0.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 10-Year Rainfall=5.15"

Area (sf)	CN	Description
1,196	49	50-75% Grass cover, Fair, HSG A
1,196		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 4S: PROPOSED LANDSCAPE AREA

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Type III 24-hr 10-Year Rainfall=5.15"

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Page 16

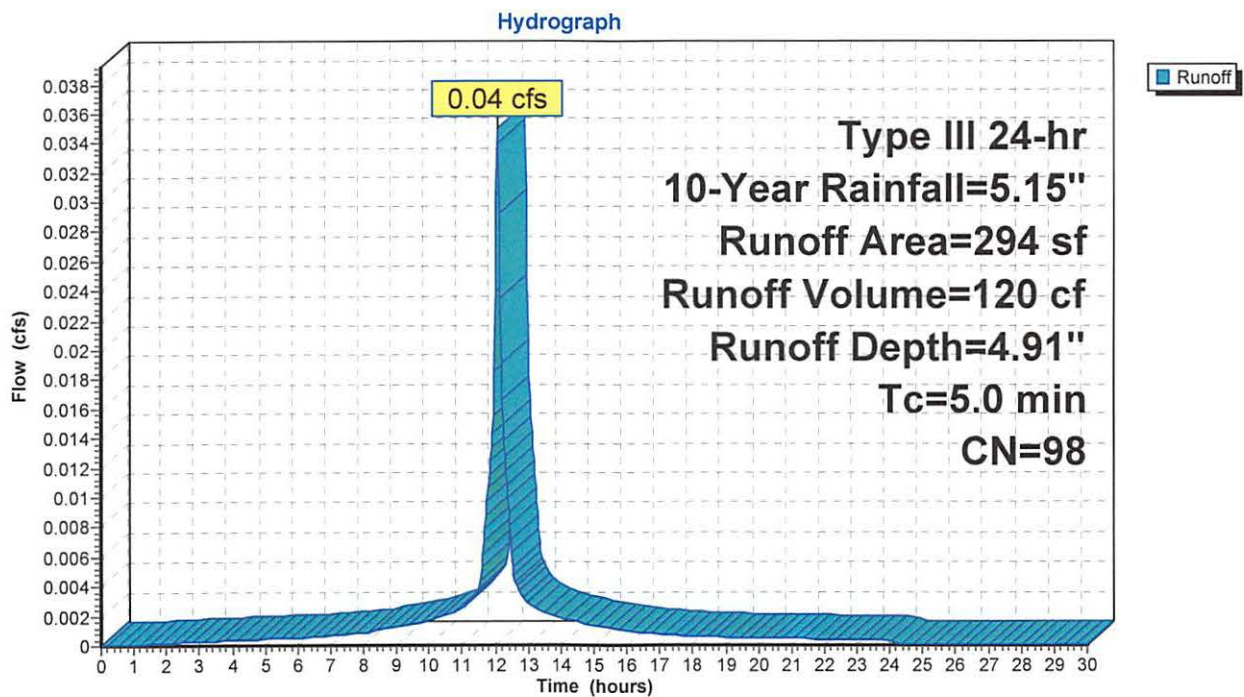
Summary for Subcatchment 6S: OTHER IMPERVIOUS

Runoff = 0.04 cfs @ 12.07 hrs, Volume= 120 cf, Depth= 4.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 10-Year Rainfall=5.15"

Area (sf)	CN	Description
294	98	Unconnected pavement, HSG A
294		100.00% Impervious Area
294		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 6S: OTHER IMPERVIOUS

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Type III 24-hr 10-Year Rainfall=5.15"

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Page 17

Summary for Pond 7P: STORM TECH SYSTEM

Inflow Area = 7,779 sf, 100.00% Impervious, Inflow Depth = 4.91" for 10-Year event
 Inflow = 0.93 cfs @ 12.07 hrs, Volume= 3,185 cf
 Outflow = 0.03 cfs @ 9.18 hrs, Volume= 2,771 cf, Atten= 97%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 9.18 hrs, Volume= 2,771 cf
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
 Peak Elev= 167.94' @ 15.30 hrs Surf.Area= 1,371 sf Storage= 1,670 cf

Plug-Flow detention time= 392.1 min calculated for 2,771 cf (87% of inflow)
 Center-of-Mass det. time= 332.6 min (1,079.2 - 746.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	166.40'	646 cf	20.92'W x 32.10'L x 3.50'H Field A 2,350 cf Overall - 735 cf Embedded = 1,615 cf x 40.0% Voids
#2A	166.90'	735 cf	ADS StormTech SC-740 +Cap x 16 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 16 Chambers in 4 Rows
#3	166.50'	2,030 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
		3,411 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
166.50	700	0	0
169.40	700	2,030	2,030

Device	Routing	Invert	Outlet Devices
#1	Discarded	166.40'	1.020 in/hr Exfiltration over Surface area
#2	Primary	169.50'	6.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.03 cfs @ 9.18 hrs HW=166.50' (Free Discharge)

↑1=Exfiltration (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=166.40' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

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Type III 24-hr 10-Year Rainfall=5.15"

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Page 18

Pond 7P: STORM TECH SYSTEM - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)

Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf

Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 5.0" Spacing = 56.0" C-C Row Spacing

4 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 30.10' Row Length +12.0" End Stone x 2 = 32.10' Base Length

4 Rows x 51.0" Wide + 5.0" Spacing x 3 + 16.0" Side Stone x 2 = 20.92' Base Width

6.0" Base + 30.0" Chamber Height + 6.0" Cover = 3.50' Field Height

16 Chambers x 45.9 cf = 735.0 cf Chamber Storage

2,349.7 cf Field - 735.0 cf Chambers = 1,614.7 cf Stone x 40.0% Voids = 645.9 cf Stone Storage

Chamber Storage + Stone Storage = 1,380.9 cf = 0.032 af

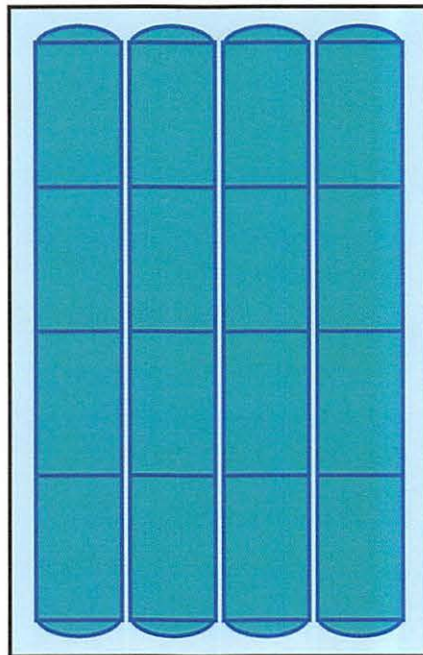
Overall Storage Efficiency = 58.8%

Overall System Size = 32.10' x 20.92' x 3.50'

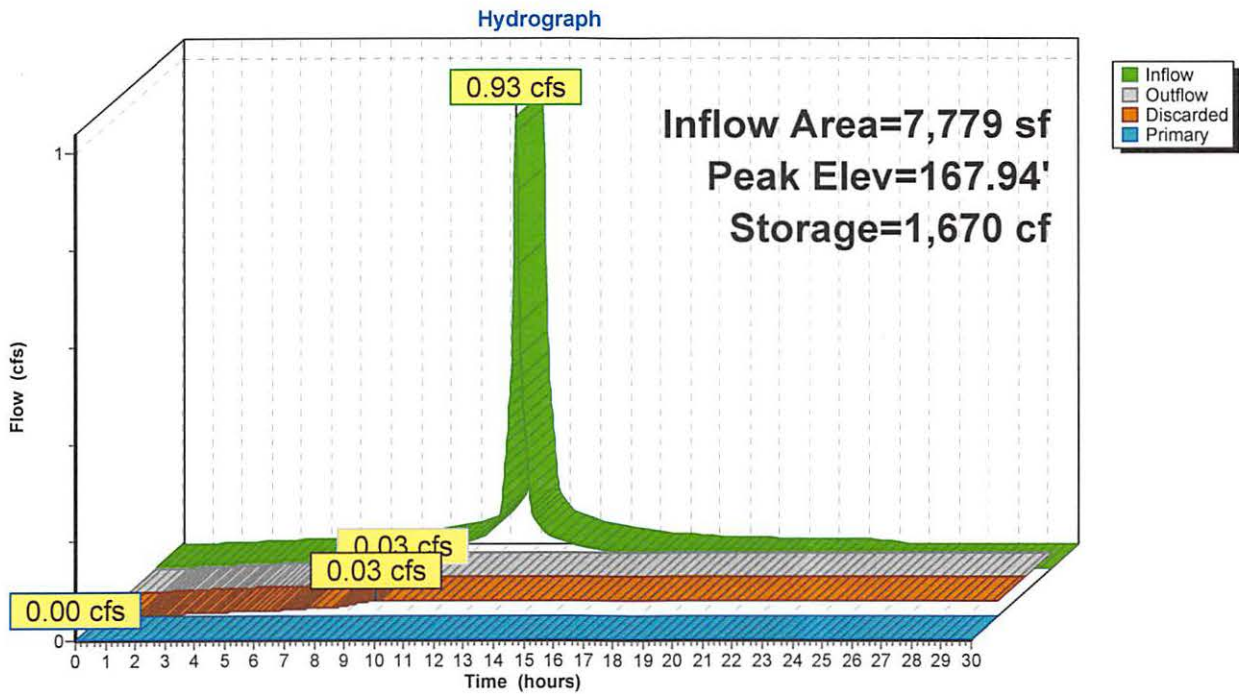
16 Chambers

87.0 cy Field

59.8 cy Stone



Pond 7P: STORM TECH SYSTEM



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Type III 24-hr 10-Year Rainfall=5.15"

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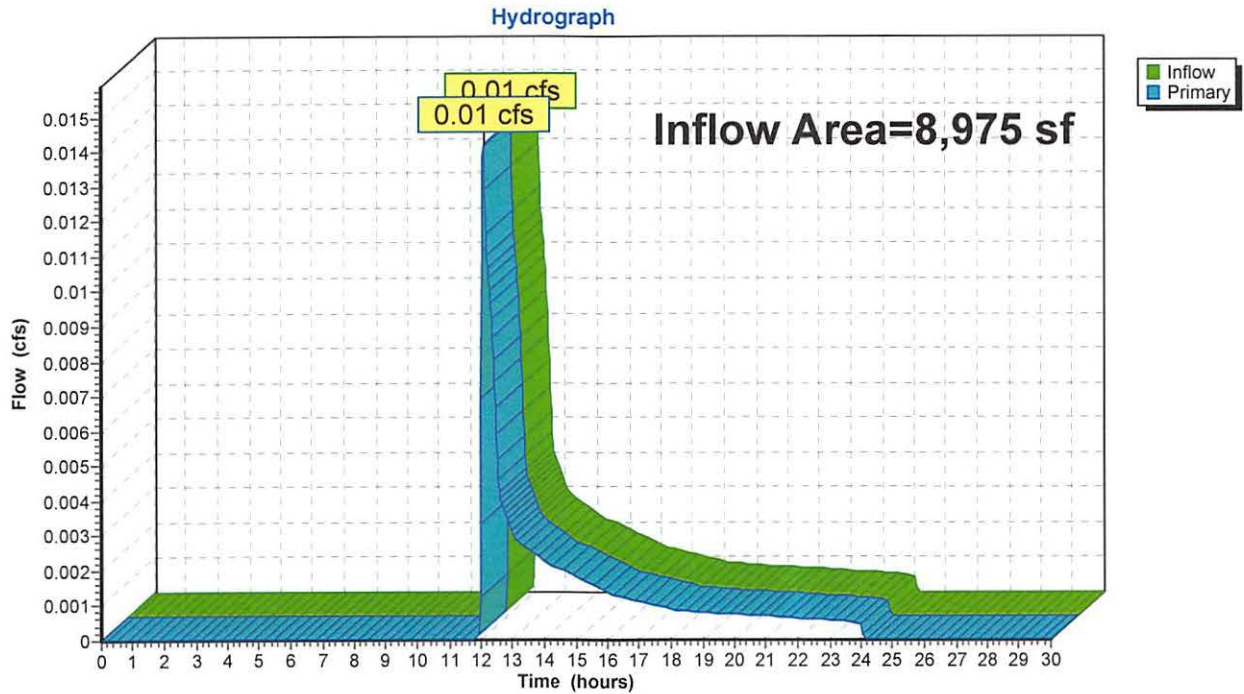
Page 20

Summary for Link 3L: PROPOSED

Inflow Area = 8,975 sf, 86.67% Impervious, Inflow Depth = 0.09" for 10-Year event
Inflow = 0.01 cfs @ 12.11 hrs, Volume= 70 cf
Primary = 0.01 cfs @ 12.11 hrs, Volume= 70 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Link 3L: PROPOSED



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Type III 24-hr 25-Year Rainfall=6.33"

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Page 21

Time span=0.00-30.00 hrs, dt=0.03 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: PROPOSED ROOF Runoff Area=7,485 sf 100.00% Impervious Runoff Depth=6.09"
Tc=5.0 min CN=98 Runoff=1.10 cfs 3,800 cf

Subcatchment4S: PROPOSED LANDSCAPE Runoff Area=1,196 sf 0.00% Impervious Runoff Depth=1.23"
Tc=5.0 min CN=49 Runoff=0.03 cfs 123 cf

Subcatchment6S: OTHER IMPERVIOUS Runoff Area=294 sf 100.00% Impervious Runoff Depth=6.09"
Tc=5.0 min CN=98 Runoff=0.04 cfs 149 cf

Pond 7P: STORM TECH SYSTEM Peak Elev=168.43' Storage=2,239 cf Inflow=1.14 cfs 3,949 cf
Discarded=0.03 cfs 2,868 cf Primary=0.00 cfs 0 cf Outflow=0.03 cfs 2,868 cf

Link 3L: PROPOSED Inflow=0.03 cfs 123 cf
Primary=0.03 cfs 123 cf

Total Runoff Area = 8,975 sf Runoff Volume = 4,072 cf Average Runoff Depth = 5.44"
13.33% Pervious = 1,196 sf 86.67% Impervious = 7,779 sf

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Type III 24-hr 25-Year Rainfall=6.33"

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Page 22

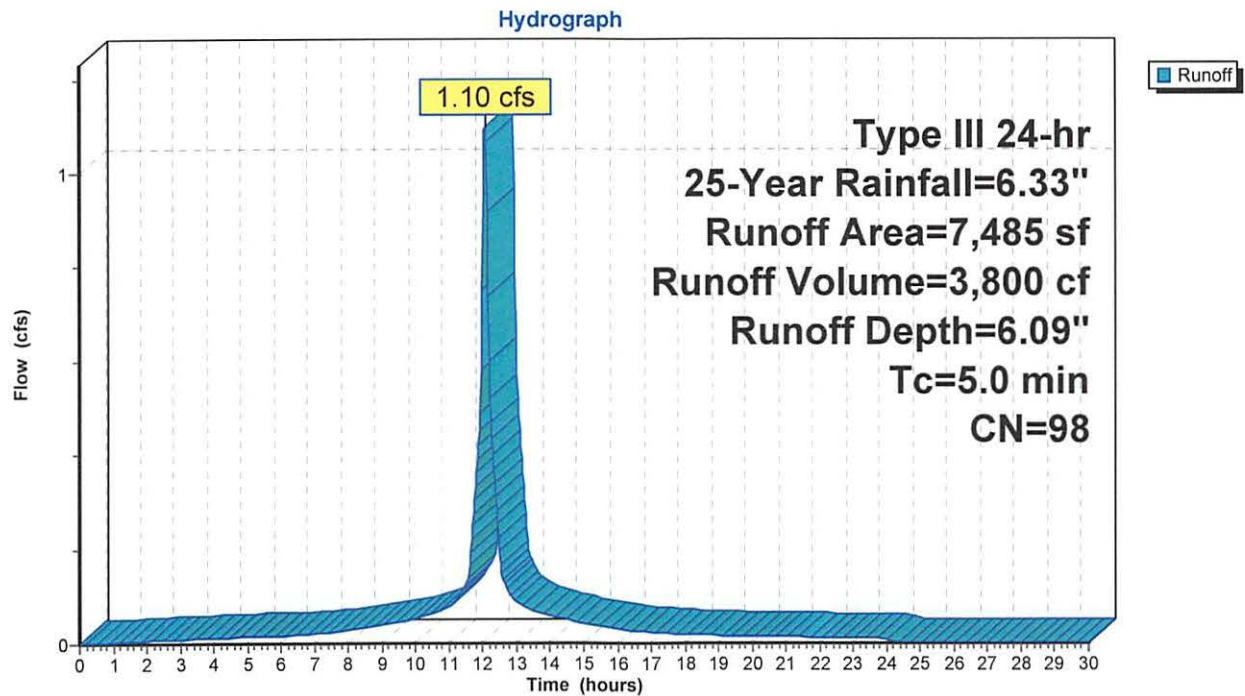
Summary for Subcatchment 1S: PROPOSED ROOF AREA

Runoff = 1.10 cfs @ 12.07 hrs, Volume= 3,800 cf, Depth= 6.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 25-Year Rainfall=6.33"

Area (sf)	CN	Description
7,485	98	Roofs, HSG A
7,485		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 1S: PROPOSED ROOF AREA

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Type III 24-hr 25-Year Rainfall=6.33"

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Page 23

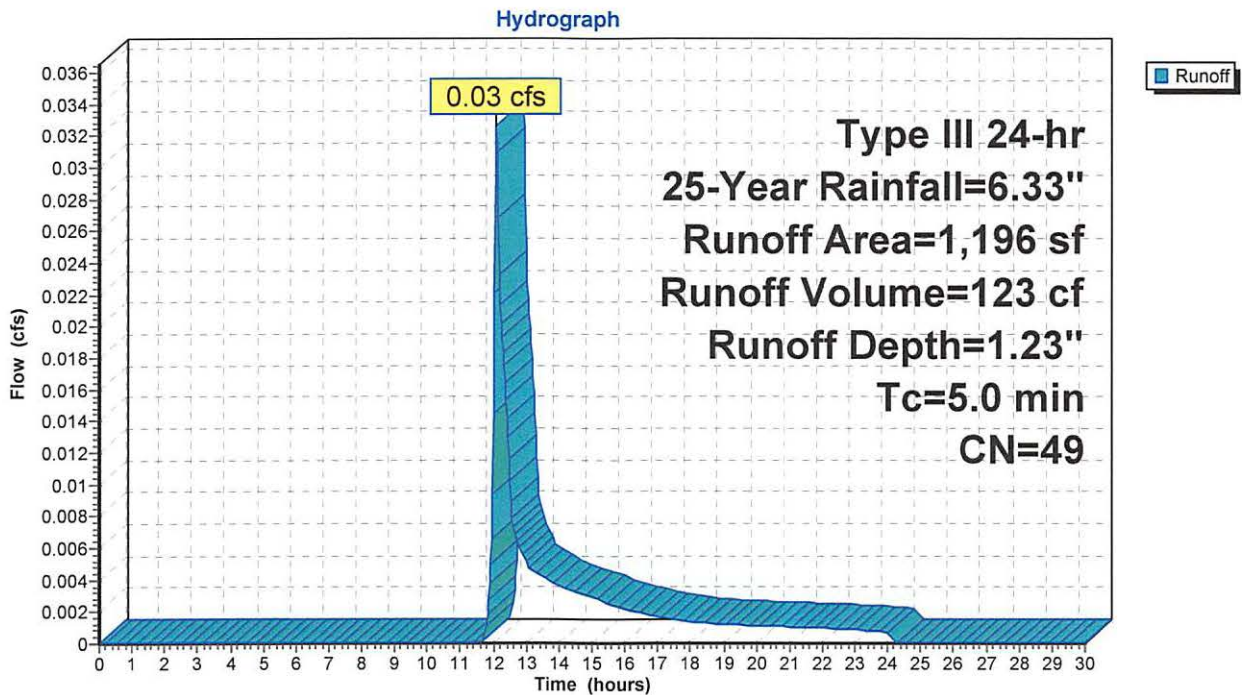
Summary for Subcatchment 4S: PROPOSED LANDSCAPE AREA

Runoff = 0.03 cfs @ 12.09 hrs, Volume= 123 cf, Depth= 1.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 25-Year Rainfall=6.33"

Area (sf)	CN	Description
1,196	49	50-75% Grass cover, Fair, HSG A
1,196		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 4S: PROPOSED LANDSCAPE AREA

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Type III 24-hr 25-Year Rainfall=6.33"

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Page 24

Summary for Subcatchment 6S: OTHER IMPERVIOUS

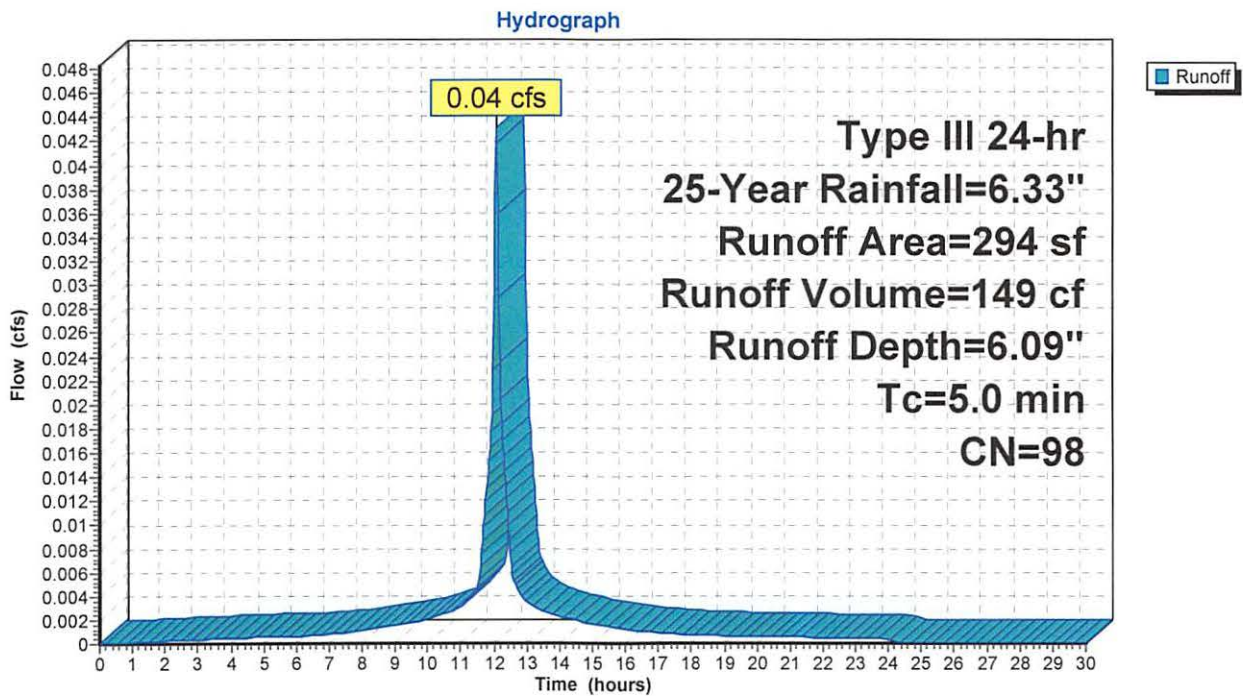
Runoff = 0.04 cfs @ 12.07 hrs, Volume= 149 cf, Depth= 6.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 25-Year Rainfall=6.33"

Area (sf)	CN	Description
294	98	Unconnected pavement, HSG A
294		100.00% Impervious Area
294		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 6S: OTHER IMPERVIOUS



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Page 25

Summary for Pond 7P: STORM TECH SYSTEM

Inflow Area = 7,779 sf, 100.00% Impervious, Inflow Depth = 6.09" for 25-Year event
 Inflow = 1.14 cfs @ 12.07 hrs, Volume= 3,949 cf
 Outflow = 0.03 cfs @ 8.55 hrs, Volume= 2,868 cf, Atten= 97%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 8.55 hrs, Volume= 2,868 cf
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
 Peak Elev= 168.43' @ 15.86 hrs Surf.Area= 1,371 sf Storage= 2,239 cf

Plug-Flow detention time= 402.5 min calculated for 2,865 cf (73% of inflow)
 Center-of-Mass det. time= 311.5 min (1,054.9 - 743.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	166.40'	646 cf	20.92'W x 32.10'L x 3.50'H Field A 2,350 cf Overall - 735 cf Embedded = 1,615 cf x 40.0% Voids
#2A	166.90'	735 cf	ADS_StormTech SC-740 +Cap x 16 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 16 Chambers in 4 Rows
#3	166.50'	2,030 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
		3,411 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
166.50	700	0	0
169.40	700	2,030	2,030

Device	Routing	Invert	Outlet Devices
#1	Discarded	166.40'	1.020 in/hr Exfiltration over Surface area
#2	Primary	169.50'	6.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.03 cfs @ 8.55 hrs HW=166.50' (Free Discharge)**↑1=Exfiltration (Exfiltration Controls 0.03 cfs)****Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=166.40' (Free Discharge)****↑2=Orifice/Grate (Controls 0.00 cfs)**

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Page 26

Pond 7P: STORM TECH SYSTEM - Chamber Wizard Field A**Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech® SC-740 with cap length)**

Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf

Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 5.0" Spacing = 56.0" C-C Row Spacing

4 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 30.10' Row Length +12.0" End Stone x 2 = 32.10' Base Length

4 Rows x 51.0" Wide + 5.0" Spacing x 3 + 16.0" Side Stone x 2 = 20.92' Base Width

6.0" Base + 30.0" Chamber Height + 6.0" Cover = 3.50' Field Height

16 Chambers x 45.9 cf = 735.0 cf Chamber Storage

2,349.7 cf Field - 735.0 cf Chambers = 1,614.7 cf Stone x 40.0% Voids = 645.9 cf Stone Storage

Chamber Storage + Stone Storage = 1,380.9 cf = 0.032 af

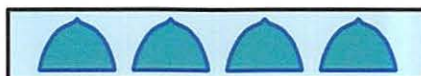
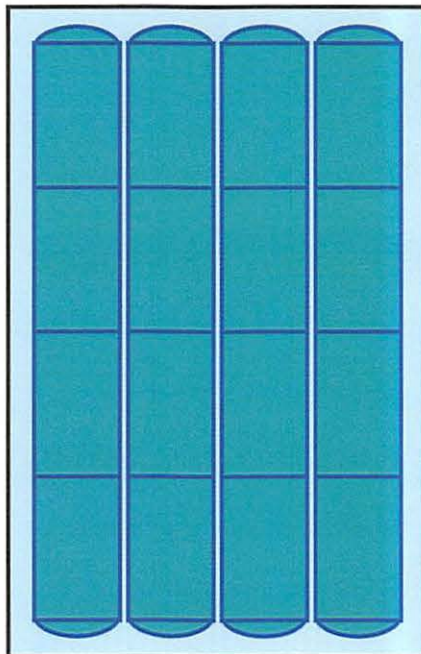
Overall Storage Efficiency = 58.8%

Overall System Size = 32.10' x 20.92' x 3.50'

16 Chambers

87.0 cy Field

59.8 cy Stone



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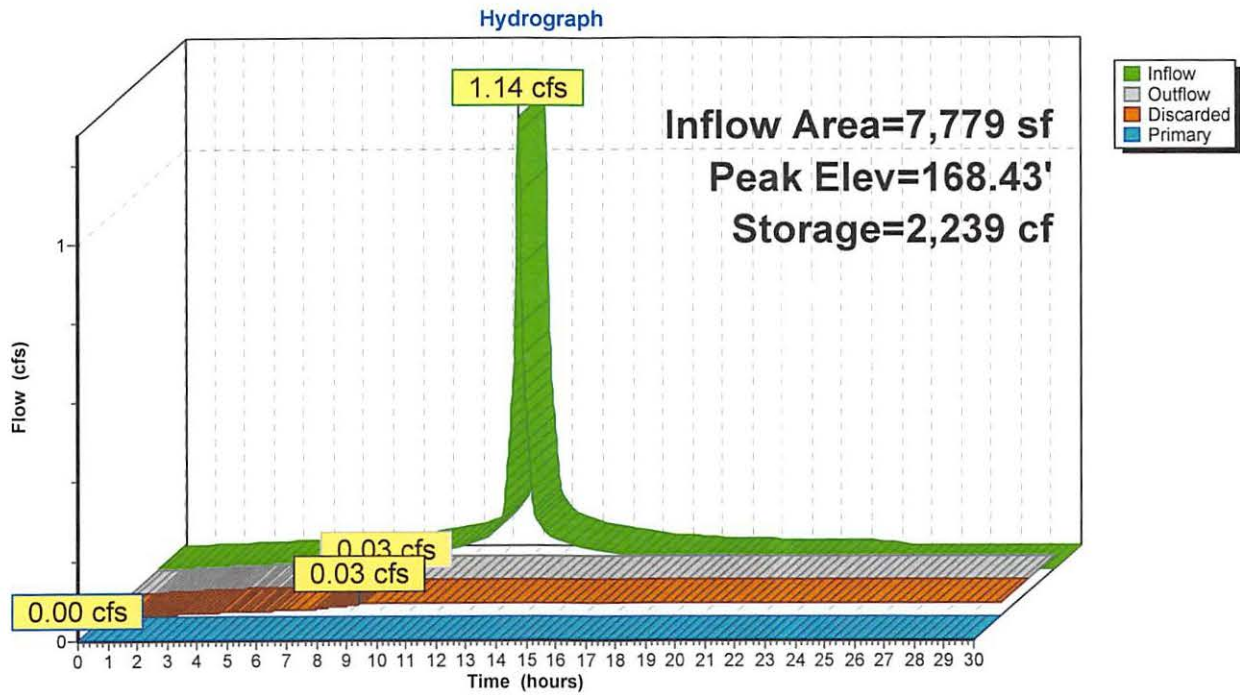
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Page 27

Pond 7P: STORM TECH SYSTEM



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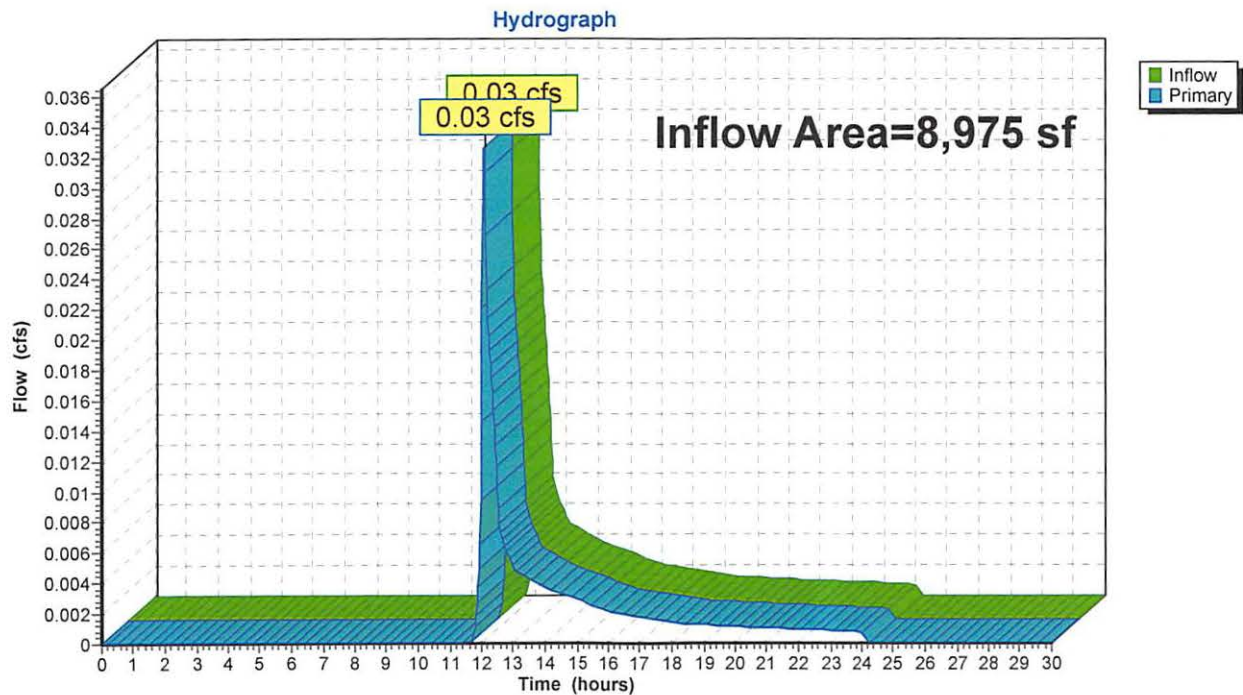
Page 28

Summary for Link 3L: PROPOSED

Inflow Area = 8,975 sf, 86.67% Impervious, Inflow Depth = 0.16" for 25-Year event
Inflow = 0.03 cfs @ 12.09 hrs, Volume= 123 cf
Primary = 0.03 cfs @ 12.09 hrs, Volume= 123 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Link 3L: PROPOSED



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Type III 24-hr 100-Year Rainfall=8.14"

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Page 29

Time span=0.00-30.00 hrs, dt=0.03 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: PROPOSED ROOF Runoff Area=7,485 sf 100.00% Impervious Runoff Depth=7.90"
Tc=5.0 min CN=98 Runoff=1.41 cfs 4,928 cf

Subcatchment4S: PROPOSED LANDSCAPE Runoff Area=1,196 sf 0.00% Impervious Runoff Depth=2.23"
Tc=5.0 min CN=49 Runoff=0.07 cfs 222 cf

Subcatchment6S: OTHER IMPERVIOUS Runoff Area=294 sf 100.00% Impervious Runoff Depth=7.90"
Tc=5.0 min CN=98 Runoff=0.06 cfs 194 cf

Pond 7P: STORM TECH SYSTEM Peak Elev=169.28' Storage=3,159 cf Inflow=1.47 cfs 5,121 cf
Discarded=0.03 cfs 2,994 cf Primary=0.00 cfs 0 cf Outflow=0.03 cfs 2,994 cf

Link 3L: PROPOSED Inflow=0.07 cfs 222 cf
Primary=0.07 cfs 222 cf

Total Runoff Area = 8,975 sf Runoff Volume = 5,343 cf Average Runoff Depth = 7.14"
13.33% Pervious = 1,196 sf 86.67% Impervious = 7,779 sf

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Type III 24-hr 100-Year Rainfall=8.14"

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Page 30

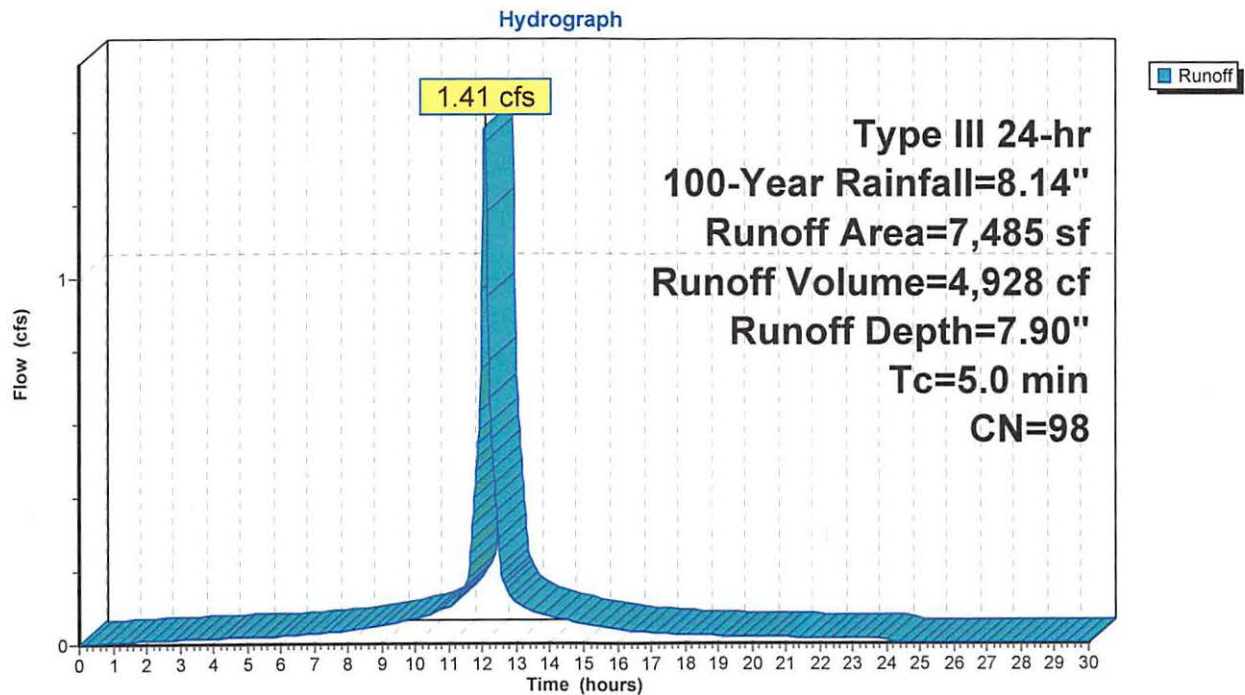
Summary for Subcatchment 1S: PROPOSED ROOF AREA

Runoff = 1.41 cfs @ 12.07 hrs, Volume= 4,928 cf, Depth= 7.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 100-Year Rainfall=8.14"

Area (sf)	CN	Description
7,485	98	Roofs, HSG A
7,485		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 1S: PROPOSED ROOF AREA

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Type III 24-hr 100-Year Rainfall=8.14"
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Page 31

Summary for Subcatchment 4S: PROPOSED LANDSCAPE AREA

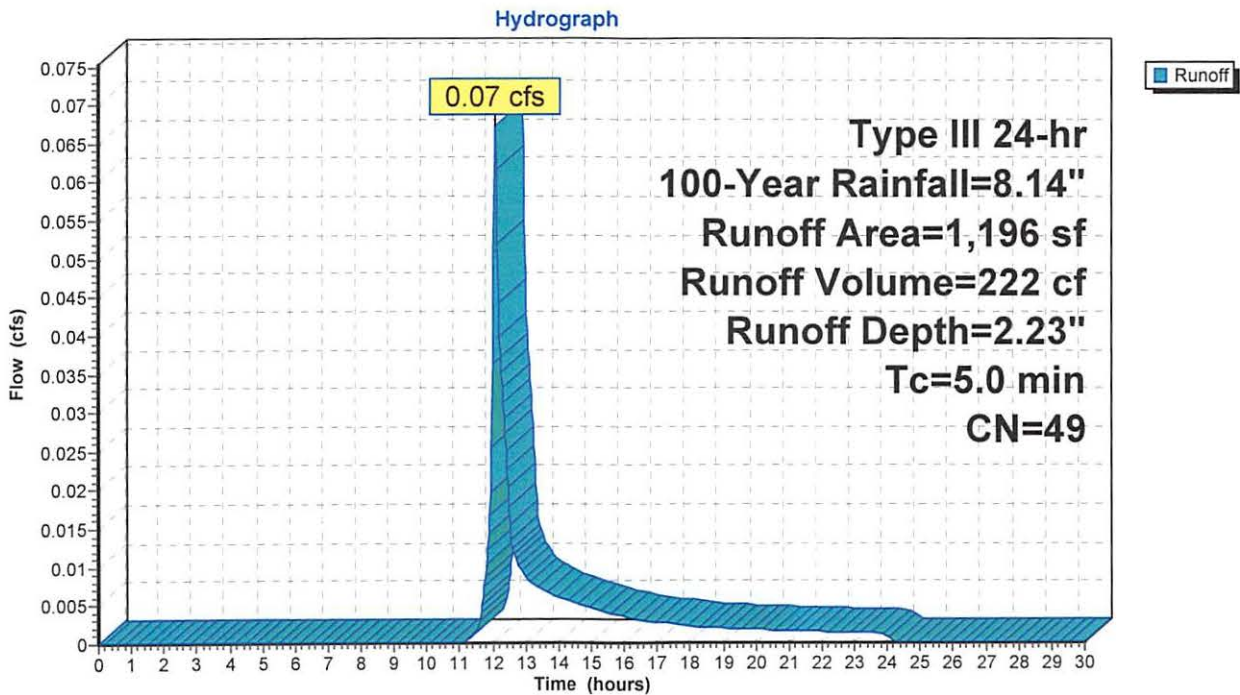
Runoff = 0.07 cfs @ 12.09 hrs, Volume= 222 cf, Depth= 2.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 100-Year Rainfall=8.14"

Area (sf)	CN	Description
1,196	49	50-75% Grass cover, Fair, HSG A
1,196		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 4S: PROPOSED LANDSCAPE AREA



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Type III 24-hr 100-Year Rainfall=8.14"

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Page 32

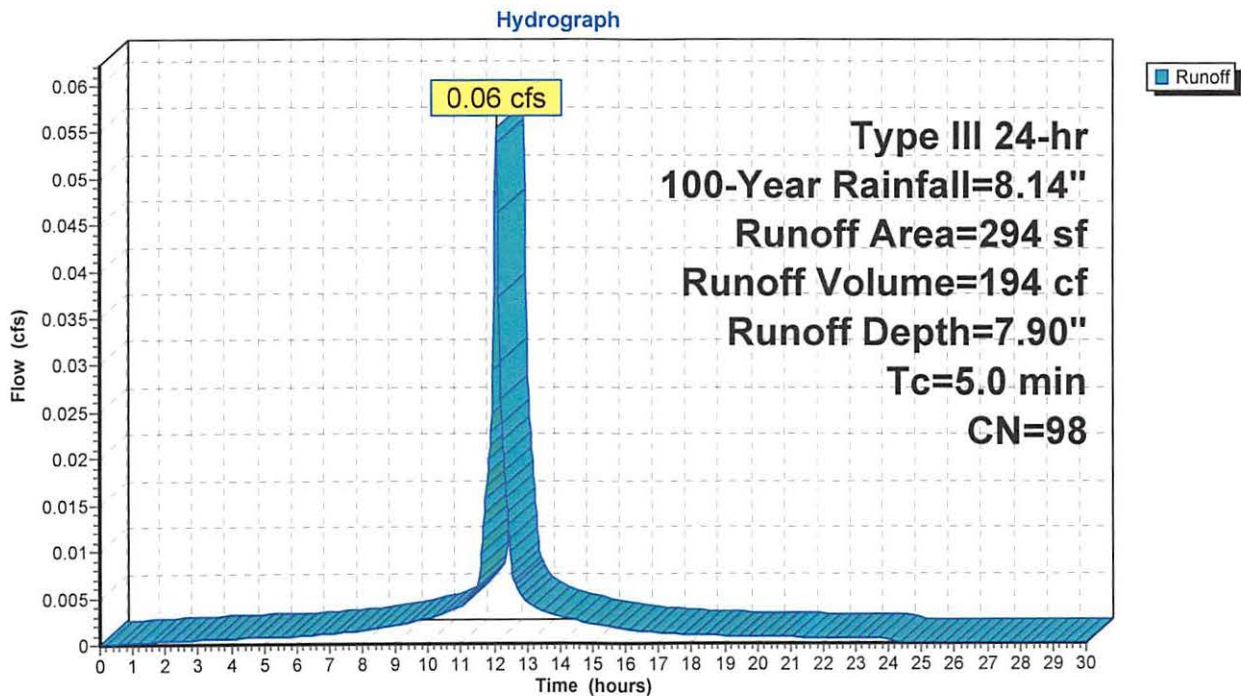
Summary for Subcatchment 6S: OTHER IMPERVIOUS

Runoff = 0.06 cfs @ 12.07 hrs, Volume= 194 cf, Depth= 7.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 100-Year Rainfall=8.14"

Area (sf)	CN	Description
294	98	Unconnected pavement, HSG A
294		100.00% Impervious Area
294		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 6S: OTHER IMPERVIOUS

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Type III 24-hr 100-Year Rainfall=8.14"

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Page 33

Summary for Pond 7P: STORM TECH SYSTEM

Inflow Area = 7,779 sf, 100.00% Impervious, Inflow Depth = 7.90" for 100-Year event
 Inflow = 1.47 cfs @ 12.07 hrs, Volume= 5,121 cf
 Outflow = 0.03 cfs @ 7.65 hrs, Volume= 2,994 cf, Atten= 98%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 7.65 hrs, Volume= 2,994 cf
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
 Peak Elev= 169.28' @ 16.86 hrs Surf.Area= 1,371 sf Storage= 3,159 cf

Plug-Flow detention time= 400.3 min calculated for 2,994 cf (58% of inflow)
 Center-of-Mass det. time= 284.0 min (1,024.1 - 740.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	166.40'	646 cf	20.92'W x 32.10'L x 3.50'H Field A 2,350 cf Overall - 735 cf Embedded = 1,615 cf x 40.0% Voids
#2A	166.90'	735 cf	ADS_StormTech SC-740 +Cap x 16 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 16 Chambers in 4 Rows
#3	166.50'	2,030 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
		3,411 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
166.50	700	0	0
169.40	700	2,030	2,030

Device	Routing	Invert	Outlet Devices
#1	Discarded	166.40'	1.020 in/hr Exfiltration over Surface area
#2	Primary	169.50'	6.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.03 cfs @ 7.65 hrs HW=166.50' (Free Discharge)
 ↗1=Exfiltration (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=166.40' (Free Discharge)
 ↗2=Orifice/Grate (Controls 0.00 cfs)

PROPOSED - Copy

Prepared by {enter your company name here}

HydroCAD® 10.00-25 s/n 09067 © 2019 HydroCAD Software Solutions LLC

Type III 24-hr 100-Year Rainfall=8.14"

Printed 7/22/2025

Page 34

Pond 7P: STORM TECH SYSTEM - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)

Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf

Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 5.0" Spacing = 56.0" C-C Row Spacing

4 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 30.10' Row Length +12.0" End Stone x 2 = 32.10' Base Length

4 Rows x 51.0" Wide + 5.0" Spacing x 3 + 16.0" Side Stone x 2 = 20.92' Base Width

6.0" Base + 30.0" Chamber Height + 6.0" Cover = 3.50' Field Height

16 Chambers x 45.9 cf = 735.0 cf Chamber Storage

2,349.7 cf Field - 735.0 cf Chambers = 1,614.7 cf Stone x 40.0% Voids = 645.9 cf Stone Storage

Chamber Storage + Stone Storage = 1,380.9 cf = 0.032 af

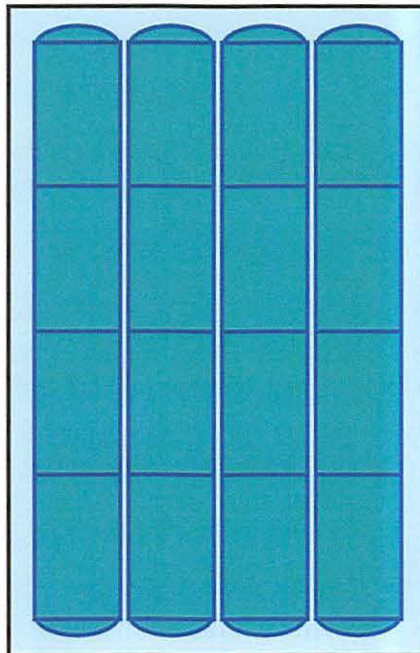
Overall Storage Efficiency = 58.8%

Overall System Size = 32.10' x 20.92' x 3.50'

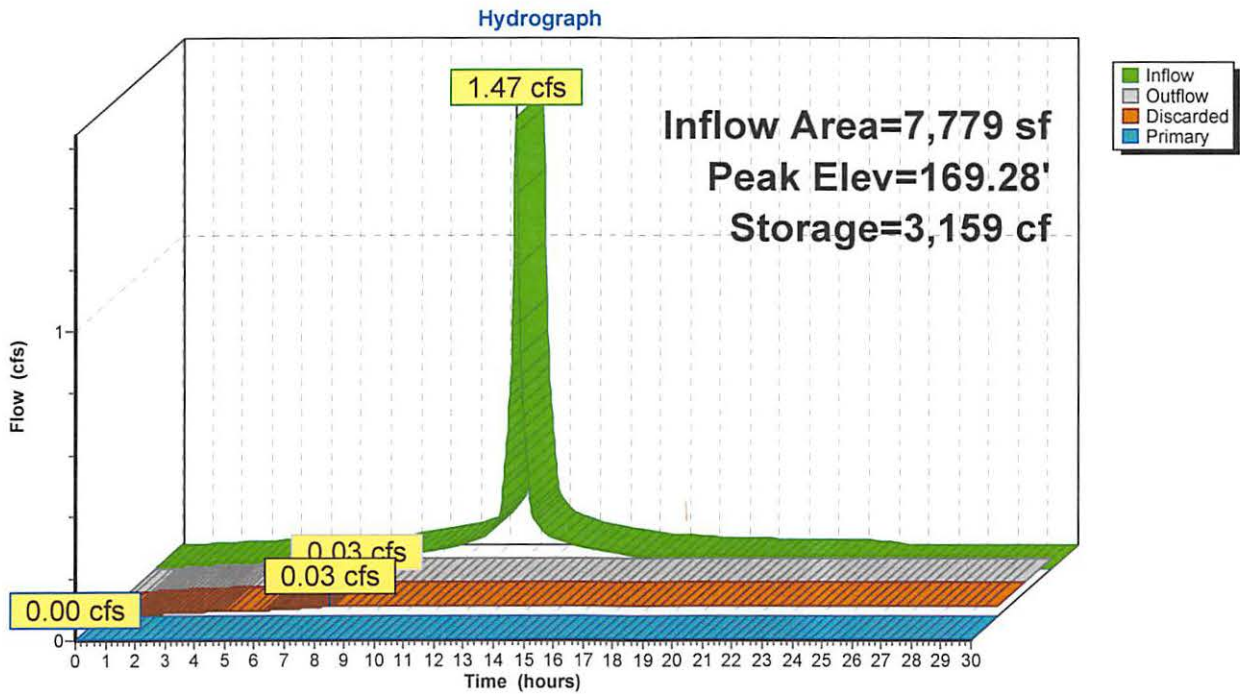
16 Chambers

87.0 cy Field

59.8 cy Stone



Pond 7P: STORM TECH SYSTEM



PROPOSED - Copy

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Type III 24-hr 100-Year Rainfall=8.14"

Printed 7/22/2025

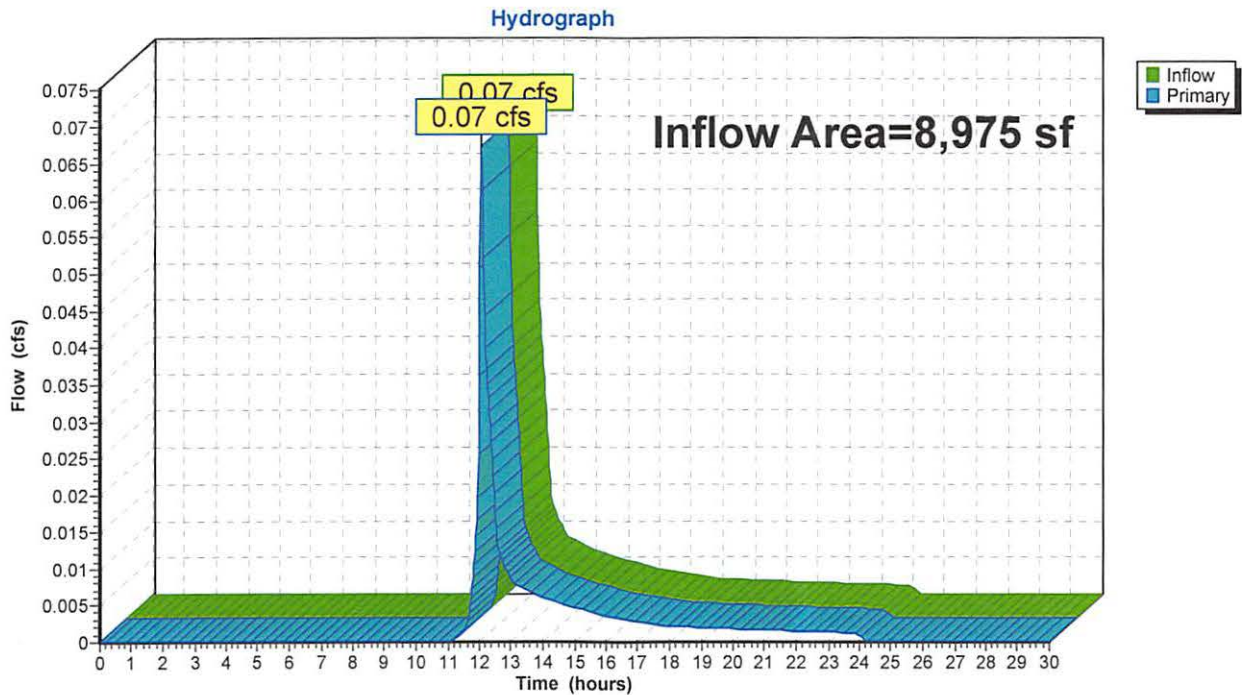
Page 36

Summary for Link 3L: PROPOSED

Inflow Area = 8,975 sf, 86.67% Impervious, Inflow Depth = 0.30" for 100-Year event
Inflow = 0.07 cfs @ 12.09 hrs, Volume= 222 cf
Primary = 0.07 cfs @ 12.09 hrs, Volume= 222 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Link 3L: PROPOSED



Appendix B – Soils Information



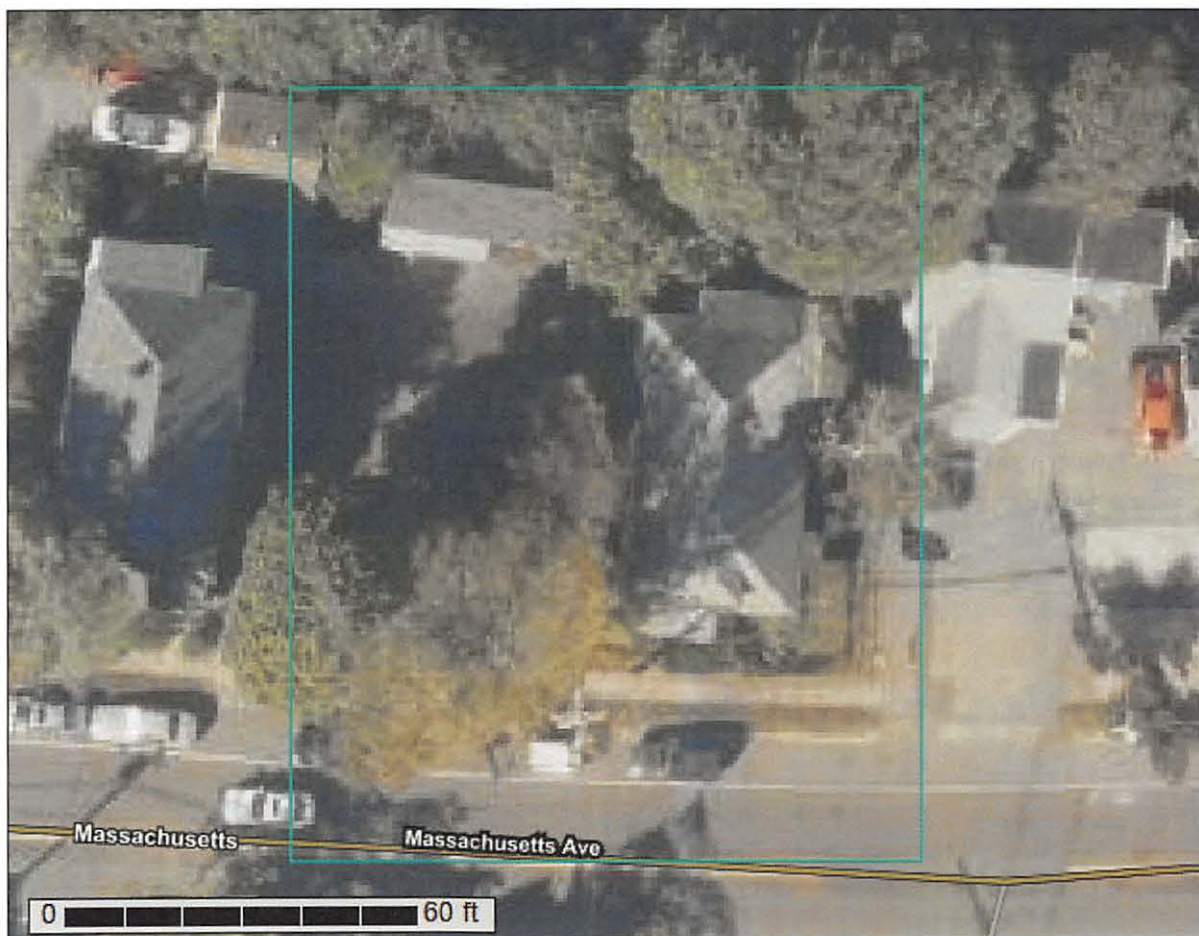
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

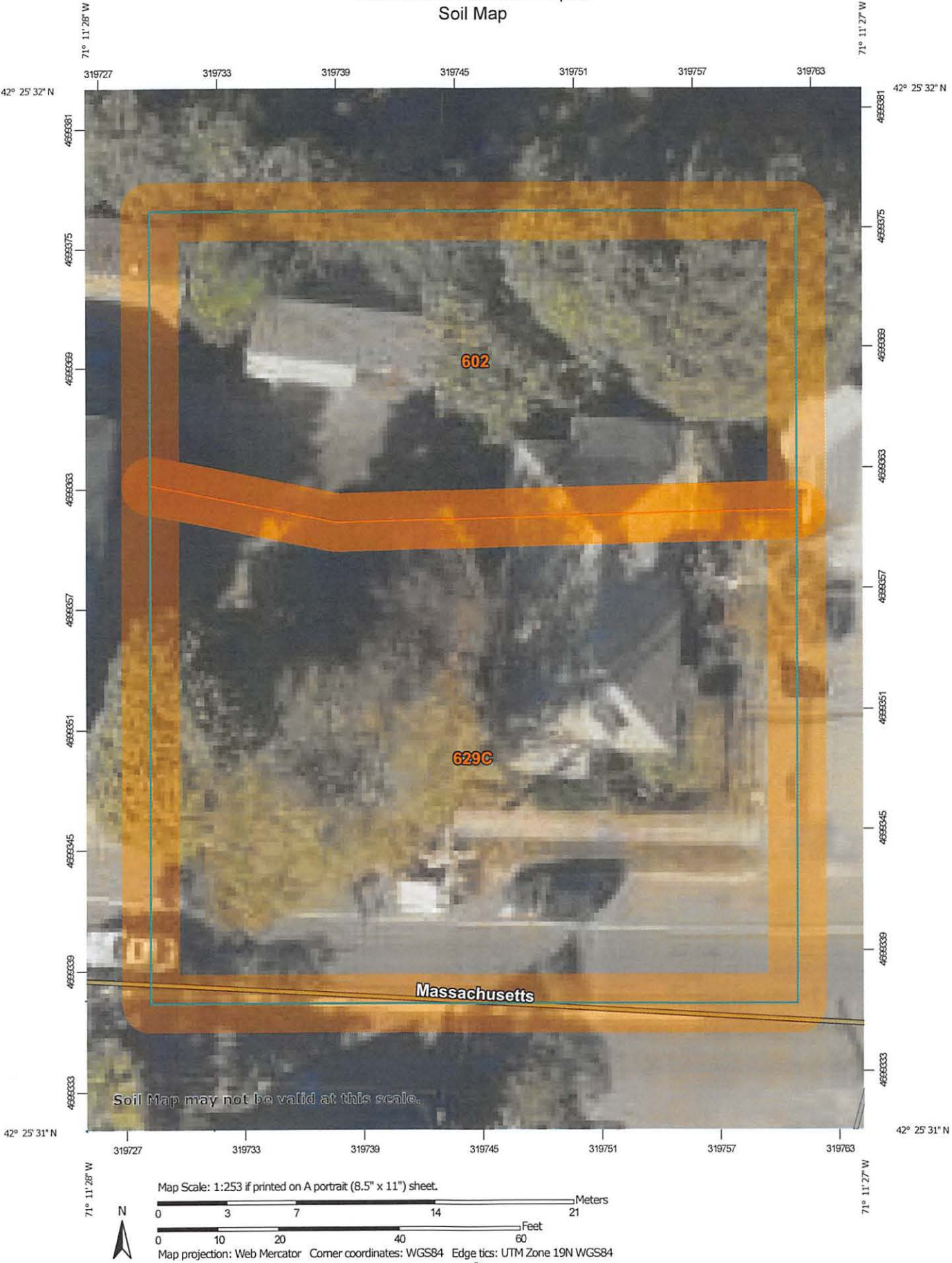
Custom Soil Resource Report for **Middlesex County, Massachusetts**



Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Middlesex County, Massachusetts

Survey Area Data: Version 23, Sep 12, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 1, 2023—Sep 1, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
602	Urban land	0.1	38.2%
629C	Canton-Charlton-Urban land complex, 3 to 15 percent slopes	0.2	61.8%
Totals for Area of Interest		0.3	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

Custom Soil Resource Report

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Middlesex County, Massachusetts

602—Urban land

Map Unit Setting

National map unit symbol: 9950

Elevation: 0 to 3,000 feet

Mean annual precipitation: 32 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 200 days

Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Excavated and filled land

Minor Components

Rock outcrop

Percent of map unit: 5 percent

Landform: Ledges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Head slope

Down-slope shape: Concave

Across-slope shape: Concave

Udorthents, wet substratum

Percent of map unit: 5 percent

Hydric soil rating: No

Udorthents, loamy

Percent of map unit: 5 percent

Hydric soil rating: No

629C—Canton-Charlton-Urban land complex, 3 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9959

Elevation: 0 to 1,000 feet

Mean annual precipitation: 32 to 54 inches

Custom Soil Resource Report

Mean annual air temperature: 43 to 54 degrees F

Frost-free period: 110 to 240 days

Farmland classification: Not prime farmland

Map Unit Composition

Canton and similar soils: 40 percent

Charlton and similar soils: 30 percent

Urban land: 25 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canton

Setting

Landform: Hills

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Side slope, base slope

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Friable loamy eolian deposits over friable sandy basal till derived from granite and gneiss

Typical profile

H1 - 0 to 8 inches: fine sandy loam

H2 - 8 to 21 inches: fine sandy loam

H3 - 21 to 65 inches: gravelly loamy sand

Properties and qualities

Slope: 3 to 15 percent

Depth to restrictive feature: 18 to 30 inches to strongly contrasting textural stratification

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Very low (about 2.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: A

Ecological site: F144AY034CT - Well Drained Till Uplands

Hydric soil rating: No

Description of Charlton

Setting

Landform: Ground moraines, drumlins

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Friable loamy eolian deposits over friable loamy basal till derived from granite and gneiss

Custom Soil Resource Report

Typical profile

H1 - 0 to 5 inches: fine sandy loam
H2 - 5 to 22 inches: sandy loam
H3 - 22 to 65 inches: gravelly sandy loam

Properties and qualities

Slope: 3 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Description of Urban Land

Setting

Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Excavated and filled land

Minor Components

Montauk

Percent of map unit: 2 percent
Landform: Hillslopes
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Head slope, nose slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Scituate

Percent of map unit: 2 percent
Landform: Hillslopes, depressions
Landform position (two-dimensional): Summit, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Udorthents, loamy

Percent of map unit: 1 percent
Hydric soil rating: No

SPRUHAN ENGINEERING, P.C.

OPERATIONS & MAINTENANCE PLAN

1513-1519 MASSACHUSETTS AVENUE,
ARLINGTON, MA.



Prepared by: Spruhan Engineering, P.C.

July 31, 2025

Operations & Maintenance Plan

Introduction

The following Stormwater Operations & Maintenance plan is for **1513-1519 Massachusetts avenue, Arlington, MA**. All erosion and sediment control measures to be used are to be constructed and installed according to the 'Massachusetts Erosion and Sediment Control Guidelines for Urban and Sub-Urban Areas.'

The plan consists of the following elements:

- Owners' information
- Operation and maintenance guidance – Pre and Post Construction
- Landscape installation and maintenance guidance
- Proposed inspection log

All erosion and sediment control measures must be installed prior to the commencement of any work. All sediment and erosion control measures shall remain in place until the entire site has been stabilized. The site is deemed stabilized when all landscaped areas have been loamed and seeded with vegetation having had the chance to establish itself. Any proposed paved areas shall have their binder course of pavement installed prior to the removal of these control measures.

The long-term operation and maintenance of a stormwater management system is as critical to its performance as its design and construction. Proper operation and maintenance ensure that the BMP will continue to remove pollutants effectively over the long-term, decreases the risk of re-suspending sediment; and therefore, improves water quality. Without proper maintenance, BMPs are likely to fail and no longer provide the necessary stormwater treatment.

The maintenance of the Drainage System is the exclusive responsibility of the Property Owner. Annual reports (example below) should be submitted to the Town Engineer every January for the prior year.

Property Owners: IG Investments LLC

Name and contact information:

Managers: ILYA ZVENIGORODSKIY

Address: 226 Harvard St, Brookline, MA, 02446

Contact info: 860-833-4081

Change on ownership: The owner(s) of the stormwater management systems, with the exception of those associated with two-family dwellings, shall notify the Department of Public Works and Conservation Commission of changes in ownership or assignment of financial responsibility.

This plan is valid in perpetuity and any future property owners are solely responsible for the management of the stormwater system on-site in accordance with this O&M Plan

Operations & Maintenance

The following operations and maintenance plan has been developed in order to preserve the drainage infrastructure that will be constructed and to ensure the drainage and infiltration system continues to function as designed.

- **Before & During Construction Operation and Maintenance Plan:**

- Significant efforts shall be made to only disturb the minimum amount of area necessary to reduce potential erosion and sediment runoff. The control of dust in disturbed areas shall consist of at the least, wetting of disturbed soil or application of calcium chloride as required to minimize airborne dust.
- A stabilized construction entrance shall be installed to reduce the tracking of material onto the main road, &, if necessary, a wheel wash station put in place.
- Hay wattles shall be installed per the site plan to prevent sediment from being washed off site.
- All drainage structures shall be protected by filter fabric (or approved equal) to prevent sedimentation from entering the drainage system during the construction period.
- Driveway, pavement, and roadway (if required) areas shall be swept to remove sediments prior to introduction into the storm water management system.
- Drainage structures shall be inspected daily and cleaned as necessary of all sedimentation and construction materials during the construction period.
- The contractor is required to contact the engineer of record for drainage system inspection at least 72 hours prior to backfilling in order to receive inspection signoff.

- **Post Construction Operation and Maintenance Plan**

Once the construction is completed, it is the owner's responsibility to maintain the items outlined below to ensure the efficiency and integrity of the drainage systems. The post construction inspections shall take place at a minimum of once during the Spring (March-May), and a minimum of once during the fall (September – November) and after every major storm.

- **Pipes** shall be inspected on a minimum on a semi-annual basis. These inspections shall take place during the spring and fall months of the year. The inspector shall take note of any debris/sediment/clogging and shall document the condition of each structure. Based upon the observed condition, the inspector shall make recommendations if any further action is required.
- **All drainage structures, including manholes trench drains, area drains, cleanouts and catch basins**, shall be inspected four times per year and shall be cleaned of all sand, debris, and sediment four times per year or whenever the depth of deposits is greater than or equal to one half the depth from the bottom of the invert of the lowest pipe in the basin.
- **Roof Gutters** shall be inspected annually and after major rain events. Remove leaves and sediment as necessary to allow rainwater to flow to system.

○ **Storm-tech SC-740 Maintenance procedures:**

- Storm-tech system shall be inspected at a minimum on a semi-annual basis, or after a major storm event.
- Remove lid and cap from inspection ports which must be brought to finished grade.
- Using a flashlight and stadia rod, measure the depth of sediment
- If sediment is above 3" depth, then cleaning is required
- A licensed professional shall provide cleanout/ flushing services of all sediment and debris via cleanouts and catch basins located per plans.
- All caps and covers shall be replaced

Other Activities:

Pavement Sweeping: The paved areas shall be swept every quarter, so four (4) times per year.

Lawn and Landscape Repairs: The lawn and landscaped areas on the site shall be inspected in the spring and fall of each year and the areas shall be restabilized as needed by seeding as lawn or mulching landscaped areas.

An INSPECTION LOG example format is shown below on Table B.1. This must be filled every time an inspection or maintenance activity is performed on any element of the stormwater management on site, included but not limited to:

- Pretreatment devices.
- Vegetation or filter media.
- Control structures.
- Embankments and slopes.
- Inlet and outlet channels and structures.
- Underground drainage.
- Sediment and debris accumulation in storage and forebay areas (including catch basins).
- Any nonstructural practices.
- Any other item that could affect the proper function of the stormwater management system

*** FINAL IMPORTANT NOTE: PROVISIONS MUST EXIST ALLOWING THE CITY OF NEWTON OR ITS DESIGNEE TO ENTER THE PROPERTY AT REASONABLE TIMES AND IN A REASONABLE MANNER FOR THE PURPOSE OF INSPECTION.**

ILYA ZVENIGORODSKIY
PROPERTY OWNER

ATTACHMENT A. LOG SHEET AND TABLES

**OPERATION & MAINTENANCE PLAN
LOG SHEET
1513-1519 MASSACHUSETTS AVENUE, ARLINGTON, MA.**

INSPECTION REPORT:

Inspection Firm: _____

Inspector's Name: _____ Date: _____

Components Inspected: _____

Signed: _____

SYSTEM MAINTENANCE:

Maintenance Firm: _____ Date: _____

Catch Basin Cleaned: Yes _____ No _____ Comments: _____

Manhole & Sumps Cleaned: Yes _____ No _____ Comments: _____

Drain Lines Inspected: Yes _____ No _____ Comments: _____

Stormwater unit System Cleaned: Yes _____ No _____ Comments: _____

Estimate of Material Removed: _____

Other Comments: _____

Signed: _____

Table 1 - Inspection log for BMP's

STORMWATER MANAGEMENT SYSTEMS INSPECTION LOG						
DATE	NAME OF INSPECTOR	NAME/TYPE OF BMP INSPECTED	CONDITION OF BMP OBSERVED	DESCRIPTION OF NEED FOR MAINTENANCE	OBSERVATIONS OF ANY PHYSICAL CHANGES TO SYSTEM COMPARED TO AS BUILT PLAN	ANNUAL SUBMISSION TO DPW



**Legal Notice of a Public Hearing, Arlington Redevelopment Board
Docket #3869, 1513-1515 and 1517-1519 Massachusetts Ave**

Notice is herewith given that an application has been filed on August 27, 2025, by Yevgeny Bernshtein, IG Investments LLC, 226 Harvard Street, Brookline, MA 02446, to open Special Permit Docket #3869 in accordance with the provisions of MGL Chapter 40A § 11, and the Town of Arlington Zoning Bylaw Sections 3.3, Special Permits, and 3.4, Environmental Design Review. The applicant proposes to demolish the existing single-family and two-family buildings and construct a mixed-use building containing 15 residential units and one commercial unit on the property located at 1513-1515 and 1517-1519 Massachusetts Ave, Arlington, MA, in the B1 Neighborhood Office District.

A Public Hearing will be held on Monday, October 6, 2025, at 7:30 pm, Arlington Community Center, Main Hall, 27 Maple Street, Arlington, MA.

Plans may be viewed at the Department of Planning and Community Development on the first floor of the Town Hall Annex, 730 Massachusetts Avenue, Arlington, MA, during office hours (Mon-Wed, 8:00-4:00; Thu, 8:00-7:00; Fri, 8:00-12:00), or at arlingtonma.gov/arb.

**Arlington Redevelopment Board
Rachel Zsembery
Chair**

9/18/2025, 9/25/2025



Town of Arlington, Massachusetts
Department of Planning and Community Development
730 Massachusetts Avenue, Arlington, Massachusetts 02476

Public Hearing Memorandum

The purpose of this memorandum is to provide the Arlington Redevelopment Board and public with technical information and a planning analysis to assist with the regulatory decision-making process.

To: Arlington Redevelopment Board
From: Claire V. Ricker, AICP Secretary Ex-Officio
Subject: Environmental Design Review, 1513-1515 and 1517-1519 Massachusetts Ave, Arlington, MA, Docket #3869
Date: November 5, 2025

I. Docket Summary

This is an application by Yevgeny Bernshtein, IG Investments LLC, 226 Harvard Street, Brookline, MA 02476, to open Special Permit Docket #3869 in accordance with the provisions of MGL Chapter 40A § 11, and the Town of Arlington Zoning Bylaw Section 3.3, Special Permits, and Section 3.4, Environmental Design Review.

On January 13, 2025, the Arlington Redevelopment Board approved Environmental Design Review Special Permit for Docket #3821 to demolish an existing single-family and two-family building in order to construct five residential units and one commercial unit at 1513-1515 and 1517-1517 Mass Ave, as allowed by special permit for a property zoned B1, Business Office District. Shortly thereafter, Town Meeting 2025 approved a zoning amendment to rezone all B1 properties to B2A, Major Business District, which was approved by the Attorney General's Office on October 2, 2025. As a result, the applicant has submitted a new application for review under the B2A zoning and, pending approval of the new proposal, requests that the ARB revoke the existing permit under Docket #3821.

The applicant now proposes to demolish the existing single-family and two-family buildings and construct a mixed-use building containing 15 residential units and one commercial unit on the subject property in the B2A Major Business District. The 15 residential units are a mix of two- and three-bedrooms. Two affordable units are required in accordance with Section 8.2 Affordable Housing Requirements. The opening of the Docket is to allow the Board to review and approve the project under Section 3.3, Special Permits, and Section 3.4, Environmental Design Review.

Materials submitted for consideration of this application include:

- Application for EDR Special Permit,
- Dimensional and Parking Information,
- Impact Statement,
- Photos of Existing Conditions,
- Architectural Plans and Drawings,
- LEED Checklist and Narrative,
- Solar Assessment,
- Proposed Plot Plan,
- Civil Plan and Engineering Design,
- Operations and Maintenance Plan,
- Stormwater Report.

II. Application of Special Permit Criteria (Arlington Zoning Bylaw, Section 3.3)

1. Section 3.3.3.A.

The use requested is listed as a Special Permit in the use regulations for the applicable district or is so designated elsewhere in this Bylaw.

As per Section 5.5.3, Use Regulations for Business Districts, a mixed-use building is allowed in the B2A Major Business District with a Special Permit under the jurisdiction of the ARB due to its location on Massachusetts Avenue. The Board can find this condition met.

2. Section 3.3.3.B.

The requested use is essential or desirable to the public convenience or welfare.

The Master Plan recommends supporting commercial areas by encouraging new mixed-use redevelopment, including residential and commercial uses, in and near commercial corridors. This new development is in close proximity to the Arlington Heights commercial district and businesses along Massachusetts Avenue. The project contains both residential units and a commercial space. The residential units will include thirteen (13) market-rate and two (2) affordable housing units for a range of family sizes and incomes. The commercial office space will promote street activity and employment opportunities and bring vibrancy to this part of Massachusetts Avenue, as well as increase the tax base for the parcel. The Board can find this condition met.

3. Section 3.3.3.C.

The requested use will not create undue traffic congestion or unduly impair pedestrian safety.

The proposed use will not create traffic congestion or impair pedestrian safety. The project proposes a single curb cut providing vehicular and bicycle access into the parking facility and one parking space per residential unit. It is utilizing the parking exemption for the first 3,000 square feet of commercial space in a mixed-use development per Section 6.1.10.C in an effort to reduce reliance on motor vehicles and vehicular traffic. The Project includes both long-term and short-term bicycle parking and is located along multiple bus routes which will provide alternate means of transportation. The Board can find this condition met.

4. Section 3.3.3.D.

The requested use will not overload any public water, drainage or sewer system or any other municipal system to such an extent that the requested use or any developed use in the immediate area or in any other area of the Town will be unduly subjected to hazards affecting health, safety, or the general welfare.

The Project will not overload any public water, drainage, sewer system or other municipal system. Additionally, a full stormwater management plan was developed, and the Project includes several green features which will improve water runoff and stormwater management. The Board can find this condition met.

5. Section 3.3.3.E.

Any special regulations for the use as may be provided in the Bylaw are fulfilled.

There are no special regulations for the proposed use. The Board can find this condition met.

6. Section 3.3.3.F.

The requested use will not impair the integrity or character of the district or adjoining districts, nor be detrimental to the health, morals, or welfare.

The use does not impair the integrity or character of the B2A district or adjoining districts and will not be detrimental to health or welfare. The surrounding uses are made up of residential, commercial, and mixed-use properties. The proposed Project will strengthen and enhance the streetscape, which is desirable for the Mass Ave corridor. There is precedent for the proposed uses in the area, and the Project has been designed to fit within the neighborhood context. A fourth floor is proposed and complies with the required pullback to limit any impact on abutters or the surrounding area. Additionally, based on the dramatic change in topography from the opposite side of Mass Ave, the final height of the structure will be comparable to many of the structures across the street and some of the newer developments along Mass Ave. The Board can find this condition met.

7. Section 3.3.3.G.

The requested use will not, by its addition to a neighborhood, cause an excess of the use that could be detrimental to the character of said neighborhood.

There will be no excess of mixed-use in the neighborhood as a result of this development; rather the Applicant's proposal will comport with the objectives of the Master Plan to maintain a mixed-use component along Mass Ave. The neighborhood currently contains a mixture of various residential and commercial uses. Mass Ave is designed to accommodate such uses and promote such mixed-use developments. The addition of new housing units should have a favorable impact on the community and will provide housing opportunities for families and young professionals. The commercial use will bring street activity to the property and enhance the streetscape. The Board can find this condition met.

III. Environmental Design Review Standards (Arlington Zoning Bylaw, Section 3.4)

1. EDR-1 Preservation of Landscape

The landscape shall be preserved in its natural state, insofar as practicable, by minimizing tree and soil removal, and any grade changes shall be in keeping with the general appearance of neighboring developed areas.

The existing landscape will be preserved wherever possible. The proposed landscape is mostly located in the side setbacks with decks and roof decks proposed for each unit. The project includes a full

landscape plan completed by Verdant Landscape Architecture, which will enhance the site's landscaping as a whole. Trees that need to be removed to accommodate the proposed building will be replaced with trees of a similar nature, and measures will be taken to ensure their long-term health. A full planting schedule has been provided within the landscape plan, including the planting of four (4) street trees along Mass Ave. There is not a significant slope on the property so grade changes should be minimal, and where applicable they will not be perceptible from Mass Ave and will keep in general appearance of neighboring developed areas. The Board can find this condition met.

2. EDR-2 Relation of the Building to the Environment

Proposed development shall be related harmoniously to the terrain and to the use, scale, and architecture of the existing buildings in the vicinity that have functional or visible relationship to the proposed buildings. The Arlington Redevelopment Board may require a modification in massing so as to reduce the effect of shadows on the abutting property in an R0, R1 or R2 district or on public open space.

As a major corridor, Mass Ave is designed to accommodate and promote mixed-use development as contemplated in the Master Plan. The proposed new building design relates to the neighborhood and vicinity. Nearby structures include a small restaurant and a 12-unit multifamily apartment building on the 1500 block of Massachusetts Avenue and one- and two-family buildings across Massachusetts Avenue. Additionally, the structures to be demolished are close in height to this proposed new building. The addition of new housing units should have a favorable impact on the community and will provide new housing opportunities. The commercial use will bring street activity to the property and enhance the streetscape. Moreover, based on the change in topography from the opposite side of Mass Ave, the final height of the proposed structure will be less than many of the structures across the street.

The new mixed-use building and site improvements are well suited for this neighborhood. The materials have been carefully selected to fit within the current context of the Mass Ave corridor, and the building has been designed with recessed decks and alternating materials to break up the massing of the building. The proposed fourth floor has been setback and is comparable in finished height to some of the newer developments along Mass Ave as well as properties across the street that are elevated based upon the natural topography. Landscaping features provide natural beauty, an inviting streetscape, and buffering from abutting properties. The Board can find this condition met.

3. EDR-3 Open Space

All open space (landscaped and usable) shall be so designed as to add to the visual amenities of the vicinity by maximizing its visibility for persons passing by the site or overlooking it from nearby properties. The location and configuration of usable open space shall be so designed as to encourage social interaction, maximize its utility and facilitate maintenance.

Open space is being provided in the form of landscaped areas and private decks for each residential unit. Overall, the decks and landscaped open space will provide an enjoyable streetscape and usable open space for the residents. A landscape buffer occurs at the rear of the building. Street trees are also included as part of the project. This will enhance the overall environmental friendliness of the building and provide a more enjoyable streetscape. The Board can find this condition met.

4. EDR-4 Circulation

With respect to vehicular and pedestrian and bicycle circulation, including entrances, ramps, walkways, drives, and parking, special attention shall be given to location and number of access points to the public streets (especially in relation to existing traffic controls and mass transit facilities), width of interior drives and access points, general interior circulation, separation of pedestrian and vehicular traffic, access to community facilities, and arrangement of vehicle parking and bicycle parking areas, including bicycle parking spaces required by Section 6.1.12 that are safe and convenient and, insofar as practicable, do not detract from the use and enjoyment of proposed buildings and structures and the neighboring properties.

Pedestrian and resident traffic circulation would use two separate and distinct front entries, one for the residential portion of the building and one for the commercial space. Design elements are being incorporated to draw attention to these entries and provide visual cues for these separate uses. Public bike racks are being provided. The fifteen parking spaces and long-term bike racks will be accessed through one singular garage entry. From the garage, residents can access the main lobby and the rear yard. The Project proposes one-to-one parking per residential unit and is utilizing the parking exemption for the first 3,000 square feet of commercial space in a mixed-use development per Section 6.1.10.C, in an effort to reduce reliance on motor vehicles and vehicular traffic.

The Project provides the required number of short- and long-term bicycle parking spaces. 26 long-term spaces and 2 short-term spaces are proposed for the office and residential uses (23 long-term and 2 short-term spaces required). The plans show the public bike rack is to be located between the sidewalk and Mass Ave. The Applicant should coordinate with DPW for approval to install a rack in the public way and submit a detail of the proposed two-tier racks to DPCD. Additionally, the project is located along multiple bus routes which will promote alternate means of transportation. The Board may find this condition is met.

5. EDR-5 Surface Water Drainage

Special attention shall be given to proper site surface drainage so that removal of surface waters will not adversely affect neighboring properties or the public storm drainage system. Available Best Management Practices for the site should be employed, and include site planning to minimize impervious surface and reduce clearing and re-grading. Best Management Practices may include erosion control and stormwater treatment by means of swales, filters, plantings, roof gardens, native vegetation, and leaching catch basins. Stormwater should be treated at least minimally on the development site; that which cannot be handled on site shall be removed from all roofs, canopies, paved and pooling areas and carried away in an underground drainage system. Surface water in all paved areas shall be collected in intervals so that it will not obstruct the flow of vehicular or pedestrian traffic and will not create puddles in the paved areas.

In accordance with Section 3.3.4., the Board may require from any applicant, after consultation with the Director of Public Works, security satisfactory to the Board to ensure the maintenance of all stormwater facilities such as catch basins, leaching catch basins, detention basins, swales, etc. within the site. The Board may use funds provided by such security to conduct maintenance that the applicant fails to do.

The Board may adjust in its sole discretion the amount and type of financial security such that it is satisfied that the amount is sufficient to provide for any future maintenance needs.

Please see attached drainage plan completed by Spruhan Engineering, P.C. The Board can find this condition met.

6. EDR-6 Utility Service

Electric, telephone, cable TV, and other such lines of equipment shall be underground. The proposed method of sanitary sewage disposal and solid waste disposal from all buildings shall be indicated.

Currently electrical, telephone, and cable services are delivered to the project site above ground as is typical for this section of Mass Ave. The applicant has requested that those existing services remain overhead. Sanitary sewage disposal and solid waste disposal from the building will be in accordance with all codes and local requirements.

7. EDR-7 Advertising Features

The size, location, design, color, texture, lighting and materials of all permanent signs and outdoor advertising structures or features shall not detract from the use and enjoyment of proposed buildings and structures and the surrounding properties.

Any signage and advertising will be in accordance with the provisions of Section 6.2 of the Zoning By-Law, compliant with the B2A Major Business District requirements. The size and location of any signs for the residential or commercial use will be completed with the intent of identifying the uses in a tasteful manner and will not detract from the character of the neighborhood or the surrounding properties. Final signage will need to be submitted, reviewed, and approved administratively by the Department of Planning and Community Development or reviewed by the Board for a sign permit.

8. EDR-8 Special Features

Exposed storage areas, exposed machinery installations, service areas, truck loading areas, utility buildings and structures, and similar accessory areas and structures shall be subject to such setbacks, screen plantings or other screening methods as shall reasonably be required to prevent their being incongruous with the existing or contemplated environment and the surrounding properties.

There are no proposed exposed storage areas, machinery installations, loading area, etc. The sprinkler room will also be enclosed and screened. The Board can find this condition met.

9. EDR-9 Safety

With respect to personal safety, all open and enclosed spaces shall be designed to facilitate building evacuation and maximize accessibility by fire, police and other emergency personnel and equipment. Insofar as practicable, all exterior spaces and interior public and semi-public spaces shall be so designed to minimize the fear and probability of personal harm or injury by increasing the potential surveillance by neighboring residents and passersby of any accident or attempted criminal act.

The interior and exterior of the building have been designed to facilitate building evacuation, including two forms of egress per unit. The proposed property will provide access to the building for fire, police, and other emergency personnel and equipment from Mass Ave. The building contains an elevator and two stairwells to provide multiple forms of convenient ingress and egress. Building features and the mixture of permanent residents and day-time occupancy at the commercial space will enliven the property and bring activity and additional safety and security to the site. The Board can find this condition met.

10. EDR-10 Heritage

With respect to Arlington's heritage, removal or disruption of historic, traditional or significant uses, structures or architectural elements shall be minimized insofar as practical whether these exist on the site or on adjacent properties.

This project includes demolition of two residential structures that are not listed on the *Inventory of Historically or Architecturally Significant Properties in the Town of Arlington* and are not under the jurisdiction of the Arlington Historical Commission. Moreover, no adjacent properties are listed on the Inventory. The Board can find this condition met.

11. EDR-11 Microclimate

With respect to the localized climatic characteristics of a given area, any development which proposes new structures, new hard surface, ground coverage or the installation of machinery which emits heat, vapor or fumes shall endeavor to minimize insofar as practicable, any adverse impacts on light, air, and water resources or on noise and temperature levels of the immediate environment.

The proposed project seeks to minimize adverse impacts on light, air, and water resources and on noise and temperature levels of the immediate environment. The proposed uses are non-intrusive, as residential and commercial uses are part of Arlington's long-term goals for Mass Ave, and historically residential units and a small commercial space do not drastically alter the noise or temperature levels of the area. The building has been designed with a recessed fourth-story in line with guidelines within the Arlington Zoning Bylaw, which limits impact on light and air. The project includes a number of environmentally friendly features, such as open space, landscaping, solar ready roof, EV charging stations, and energy efficient appliances which promote mixed-use development in a responsible manner. The Board can find this condition met.

12. EDR-12 Sustainable Building and Site Design

Projects are encouraged to incorporate best practices related to sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality. Applicants must submit a current Green Building Council Leadership in Energy and Environmental Design (LEED) checklist, appropriate to the type of development, annotated with narrative description that indicates how the LEED performance objectives will be incorporated into the project.

The proposed project will incorporate many features relating to sustainability, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality. A LEED checklist has been provided and made part of this application package. The project currently contains the following:

- Compliance with the Stretch Energy Code
- Sustainable building materials
- Energy efficient appliances and mechanical systems
- Energy efficient lighting
- Solar ready roof
- Light colored roofing system
- Sustainable landscaping plantings
- Non-invasive plant materials
- Stormwater management
- EV charging stations

IV. Findings

1. The ARB can find that the project is consistent with Environmental Design Review per §3.4 of the Zoning Bylaw.
2. The ARB can find that the project is consistent with §3.3, Special Permits of the Zoning Bylaw.

V. Conditions

A. General

1. The final design, sign, exterior material, landscaping, and lighting plans shall be subject to the approval of the Arlington Redevelopment Board or administratively approved by the Department of Planning and Community Development.
2. Any substantial or material deviation during construction from the approved plans and specifications is subject to the written approval of the Arlington Redevelopment Board.
3. The Board maintains continuing jurisdiction over this permit and may, after a duly advertised public hearing, attach other conditions or modify these conditions as it deems appropriate in order to protect the public interest and welfare.
4. Snow removal from all parts of the site, as well as from any abutting public sidewalks, shall be the responsibility of the owner and shall be accomplished in accordance with Town Bylaws.
5. Trash shall be picked up only on Monday through Friday between the hours of 7:00 am and 6:00 pm. All exterior trash and storage areas on the property, if any, shall be properly screened and maintained in accordance with Article 30 of Town Bylaws.
6. The Applicant shall provide a statement from the Town Engineer that all proposed utility services have adequate capacity to serve the development. The applicant shall provide evidence that a final plan for drainage and surface water removal has been reviewed and approved by the Town Engineer.
7. Upon installation of landscaping materials and other site improvements, the Applicant shall remain responsible for such materials and improvement and shall replace and repair as necessary to remain in compliance with the approved site plan.
8. All utilities serving or traversing the site (including electric, telephone, cable, and other such lines and equipment) shall be underground.
9. Upon the issuance of the building permit, the Applicant shall file with the Building Inspector and the Department of Community Safety the names and telephone numbers of contact personnel who may be reached 24 hours each day during the construction period.
10. Building signage shall be filed with and reviewed and approved by the Department of Planning and Community Development and Inspectional Services.
11. The applicant must comply with the conditions set forth herein, with the State Building Code, including the Town of Arlington requirements, and, where applicable, with the Massachusetts Architectural Access Board regulations.

12. The applicant must obtain the necessary building permits and work with the Town Engineer to ensure compliance with all applicable codes.

B. Special Conditions

1. The owner will work with the Department of Planning and Community Development to comply with all requirements of Section 8.2, Affordable Housing Requirements.
2. The affordable units must be equitably dispersed throughout the building and shall be comparable to market-rate units in terms of location, quality and character, room size, number of rooms, number of bedrooms, and external appearance.
3. An Affordable Housing Deed Restriction shall be executed with the Town prior to issuance of an Occupancy Permit for the two affordable units.
4. No condominium conversion of said affordable rental units shall be permitted without the express permission of this Board. In the case of a proposed condominium conversion, Applicant shall work with the Department of Planning and Community Development to ensure that the units continue to meet the requirements of Section 8.2.



Town of Arlington, Massachusetts

Discussion of 455 Mass Ave

Summary:

9:10 pm The Board will discuss the façade of 455 Mass Ave.

ATTACHMENTS:

	Type	File Name	Description
▢	Reference Material	Certified_Decision_455_Mass_Ave_11-30-2021.pdf	Certified Decision 455 Mass Ave 11-30-2021

I hereby certify this is a True Copy of the Decision of the Arlington Redevelopment Board as filed with the Office of the Town Clerk of the Town of Arlington, Massachusetts on 11/9/2021 and that 20 days have elapsed after the Decision and no Appeal has been filed. ATTEST:

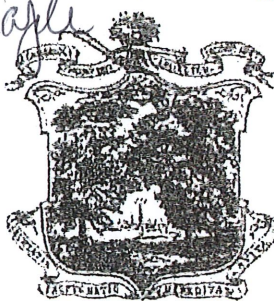
11/30/21
Date of Issue

Johanna H. Bacile
Town Clerk

TOWN CLERK'S OFFICE
ARLINGTON, MA 02174

2021 NOV -9 AM 9:58

RECEIVED



ARLINGTON REDEVELOPMENT BOARD

Arlington, Massachusetts
Middlesex, ss

DOCKET NO. 3673

DECISION
Special Permit Under
ENVIRONMENTAL DESIGN REVIEW

Applicant: 2-14 Medford Street, LLC, 455 Massachusetts Avenue, Suite 1, Arlington, MA,
02474

Property Address: 455-457 Massachusetts Avenue, Arlington, Massachusetts 02474

Hearing Dates: September 27 and October 25, 2021
Date of Decision: October 25, 2021

20 Day Appeal Period Ends: November 29, 2021

Members
Approved

Eugene B. Benson

Rachel J. Zimber

Stephen A. Beaulieu

Johanna H. Bacile
Town Clerk's Certification

Opposed

11/30/21
Date

I hereby certify this is a True Copy of the Decision of the Arlington Redevelopment Board as filed with the Office of the Town Clerk of the Town of Arlington, Massachusetts on 11/9/2021 and that 20 days have elapsed after the Decision and no Appeal has been filed. ATTEST:

11/30/21
Date of Issue

John A. Bragdon
Town Clerk



TOWN CLERK'S OFFICE
ARLINGTON, MA 02174

2021 NOV -9 AM 9:57

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Town of Arlington, Massachusetts

Redevelopment Board

730 Massachusetts Avenue, Arlington, Massachusetts 02476

DECISION OF THE BOARD

Environmental Design Review Docket #3673

455-457 Massachusetts Avenue, Arlington, MA 02474

2-14 Medford Street, LLC

October 25, 2021

This Decision applies to Environmental Design Review Special Permit Docket #3673 granted to 2-14 Medford Street, LLC, 455 Massachusetts Avenue, Suite 1, Arlington, MA, 02474, to convert a portion of existing ground floor retail to a residential lobby and second floor office spaces to residential units at 455-457 Massachusetts Avenue and adding a second floor to a one-story brick commercial structure at 2-14 Medford Street, consolidating two buildings into one mixed-use building in the B3 Village Business District. The proposed building will be a two-story mixed-use structure; the structure encompasses multiple addresses: 4 Medford Street, 6 Medford Street, 8 Medford Street, 10 Medford Street, 12 Medford Street, 14 Medford Street, 449 Massachusetts Avenue, 451 Massachusetts Avenue, 455 Massachusetts Avenue, 457 Massachusetts Avenue, and 463 Massachusetts Avenue. The 13 residential units are comprised of one (1) studio and 12 one-bedroom rental residential units and will include two (2) deed-restricted affordable rental units per section 8.2 of the Zoning Bylaw. Public hearings were held on September 27, 2021, and October 25, 2021.

Materials submitted for consideration of this application include:

- Application for EDR Special Permit, including an Environmental Impact Statement;
- Site Development Plan Set, prepared by Allen & Major Associates, Inc. dated August 20, 2021;
- Architectural Drawing Set, including floor plans, elevations, and renderings, prepared by Market Square Architects, dated July 27, 2021;
- Description of project construction process by project estimated, no date;
- Mixed-Use Redevelopment Drainage Summary prepared by Allen & Major Associates, dated August 20, 2021; and
- LEED Checklist.
- Architectural and site plan sets, including elevations, schematics, renderings, and signage dated October 19, 2021
- A document responding to the Redevelopment Board's requests during the prior hearing.

The following criteria have been met, per Section 3.3.3, Arlington Zoning Bylaw:

1. Mixed-use is allowed by Special Permit in the B3 Village Business District. The Zoning Bylaw, in Section 5.5.1.D, indicates that the district's predominant uses include retail, service, and office establishments catering to both convenience and comparison-good shoppers and oriented to pedestrian traffic. Mixed-use buildings are allowed and encouraged, including in the principal business area at Medford Street and Massachusetts Avenue. Mixed-use is a combination of two or more distinct land uses, such as those proposed by this applicant, and the definition encourages such uses to be in a single, multi-story structure.
2. The requested use is essential and desirable and advances the Arlington Master Plan and Housing Production Plan goals and strategies.
3. The development will include 16 surface parking spaces for cars, including one (1) ADA accessible van parking space and thirty-four (34) short- and long-term parking spaces for bicycles, 26 long-term indoor spaces and 8 short-term outdoor spaces.
4. The development will meet stormwater design standards, including the installation of pervious paver systems, an underground filtration system, and a landscaped buffer will be introduced to a previously completely impervious site. Overall, there will be a reduction of impervious area and quantity of stormwater flowing from the site. The development will improve, not overload, public utilities.
5. The development will need to meet the Arlington Zoning Bylaw Special Regulation 8.2 which outline affordable housing requirements. Two (2) units will be required to be representative of the mix of units in the building and made available to eligible households making up to 70% of the area median income. The units will be equitably dispersed throughout the proposed building.
6. The use does not impair the integrity or character of the neighborhood. The mixed-use building is in keeping with adjacent land uses in Arlington Center. New residential units will not impair the integrity or character of the district, or the two adjoining districts and it will not be detrimental to health or welfare. The building is consistent with the Design Standards for the Town of Arlington.
7. The use will not be in excess or detrimental to the character of the neighborhood.

The following criteria have been met, per Section 3.4.4, Arlington Zoning Bylaw:

A. EDR-1 Preservation of Landscape

The existing site condition is primarily impervious. Approximately 2,457 square feet of the site will include a landscaped buffer of perennials, flowering trees, and arborvitae and pervious walkways along the side property line and a landscaped walkway to the lobby. The new landscaping will introduce a buffer from the rear parking lot of the property at 473-475 Massachusetts Ave.

B. EDR-2 Relation of the Building to the Environment

The development is in the B3 Village Business District, which constitutes several blocks along Massachusetts Avenue and Broadway in Arlington Center. Building heights in the vicinity range from single-story to 11-stories. The B5 Central Business District, across the street, includes mixed-use and larger residential buildings. There is a range of architectural styles and zoning districts in the vicinity. The ground floor storefronts will largely be preserved, however the transparency of the lobby for the apartment units will be reduced as the existing glass storefront will be reconstructed with three smaller windows. The applicant proposes to remove the awning and restore the concrete detailing above the façade at 455 Massachusetts Avenue storefront; the existing benches along Massachusetts Avenue will be maintained, and flower boxes and awnings will be added along the façade. The second-floor façade maintains a commercial mixed-use appearance and roofline consistent with adjacent structures in the district. The Board granted relief from corner lot setback requirements in 5.3.8 per Section 5.3.16 which would require significant alteration of a façade and moving an existing building back to meet the adjacent church and school building on Medford Street.

C. EDR-3 Open Space

The redevelopment will add areas of landscaping to an existing impervious site, including approximately 2,457 square feet of landscaping. The Board granted relief from buffer requirements per Section 5.3.21 which would require a 15-foot landscaped buffer in lieu of required on-site parking. The Board granted relief from usable and landscaped open space requirements per Section 5.5.2 B.

D. EDR-4 Circulation

The development includes 16 spaces for vehicles located at-grade at the rear of the property, including one van-accessible HP parking space which is less than the required 42 vehicle parking spaces. At least 15 of those 16 spaces must be reserved for residents of the building. The development also includes 34 indoor and outdoor bicycle parking spaces, more than the required 28 bicycle parking spaces. The Board granted relief from the required number of parking spaces, contingent on the applicant submitting the required Transportation Demand Management Plan per Section 6.1.5 to be reviewed and approved administratively by the Department of Planning and Community Development. The Board also granted relief from the drive aisle dimensions per Section 6.1.11.C(3) from the required 24-foot aisle width to a 20-foot aisle width to accommodate on-site parking.

E. EDR-5 Surface Water Drainage

The development will improve stormwater management and surface drainage through installation of pervious pavers and underground filtration system to reduce stormwater runoff. The development is compliant with the Town's stormwater bylaw. 1,008 square feet of presently impervious pavement will be replaced with pervious, landscaped areas.

F. EDR-6 Utilities Service

All new utility connections will be provided by existing utility lines adjacent to the property.

G. EDR-7 Advertising Features

The Board required a detailed signage template package for Medford Street and Massachusetts Avenue storefronts and individual signage for future building commercial tenants to be reviewed and approved administratively by the Department of Planning and Community Development.

H. EDR-8 Special Features

All structures are appropriately set back and include appropriate screening and enclosures of additional structures on the building and in the parking lot.

I. EDR-9 Safety

The development meets all relevant health and safety codes.

J. EDR-10 Heritage

The proposal will include demolition of the rear of an existing structure on Massachusetts Avenue and on Medford Street to create conditions that will allow for a second building story and rear parking area. The proposed massing and preliminary design for the proposed building are compatible with other uses in the immediate neighborhood. While both structures are part of the Arlington Center Historic District area, only 4-14 Medford Street is a contributing historic structure as identified on the *Inventory of Historically or Architecturally Significant Properties in the Town of Arlington*. Both structures are under the jurisdiction of the Arlington Historical Commission, which will provide final review and approval of building design elements.

K. EDR-11 Microclimate

There will be no adverse impacts on air and water resources or on temperature levels of the immediate environment.

L. EDR-12 Sustainable Building and Site Design

The redevelopment as proposed generates a score that potentially qualifies for LEED platinum certification.

The Board made the following findings in this Decision:

1. The project is consistent with Environmental Design Review per Section 3.4 of the Zoning Bylaw.
2. The setbacks are appropriate per Section 5.3.16.
3. The site plan is appropriate per Section 5.3.21.
4. The redevelopment will not adversely affect the adjacent R1 zoning districts per Section 5.3.19.
5. The landscaped areas are appropriate per Section 5.5.2 B.
6. The vehicle and bicycle parking improvements justify the parking reduction per Section 6.1.5 subject to a Transportation Demand Management Plan.
7. The usable and landscaped open space plans are appropriate.
8. The driveway aisle is appropriate per Section 6.1.11.C(3).

The redevelopment must adhere to the following general conditions:

1. The final design, façade materials, landscaping, fencing, lighting, and sign plans and relevant specifications shall be subject to the approval of the Arlington Redevelopment Board. Any substantial or material deviation during construction from the approved plans and specifications is subject to the written approval of the Arlington Redevelopment Board.
2. Any substantial or material deviation during construction from the approved plans and specifications is subject to the written approval of the Arlington Redevelopment Board.
3. The Board maintains continuing jurisdiction over this permit and may, after a duly advertised public hearing, attach other conditions, or modify these conditions as it deems appropriate to protect the public interest and welfare.
4. Snow removal from all parts of the site, as well as from any abutting public sidewalks, shall be the responsibility of the owner and shall be accomplished in accordance with Town Bylaws.
5. Trash shall be picked up only on Monday through Friday between the hours of 7:00 am and 6:00 pm. All exterior trash and storage areas on the property, if any, shall be properly screened and maintained in accordance with Town Bylaws.
6. The Owner shall provide a statement from the Town Engineer that all proposed utility services have adequate capacity to serve the development. The owner shall provide evidence to the Department of Planning and Community Development that a final plan for drainage and surface water removal has been reviewed and approved by the Town Engineer.
7. Upon installation of landscaping materials and other site improvements, the owner shall remain responsible for such materials and improvement and shall replace and repair as necessary to remain in compliance with the approved site plan.
8. All utilities serving or traversing the site (including electric, telephone, cable, and other such lines and equipment) shall be underground.
9. Upon the issuance of the building permit the Owner shall file with the Inspectional Services Department and the Police Department the names and telephone numbers of contact personnel who may be reached 24 hours each day during the construction period.

The project must adhere to the following special conditions:

1. The owner shall work with the Department of Planning and Community Development to comply with all requirements of Section 8.2, Affordable Housing Requirements.
2. The affordable units shall be equitably dispersed throughout the building and shall be comparable to market-rate units in terms of location, quality and character, room size, number of rooms, number of bedrooms, and external appearance as approved by the Department of Planning and Community Development.
3. An Affordable Housing Deed Restriction shall be executed with the Town prior to issuance of an Occupancy Permit for the two (2) affordable units.
4. No condominium conversion of said affordable rental units shall be permitted without the express permission of this Board. In the case of a proposed condominium conversion, Applicant shall work with the Department of Planning and Community Development to ensure that the units continue to meet the requirements of Section 8.2.
5. The Owner shall submit a Transportation Demand Management (TDM) plan for review and approval by the Department of Planning and Community Development.
6. The Owner shall submit a final landscaping and planting plan for review and approval by the Department of Planning and Community Development.
7. The Owner shall submit a final signage template plan for Medford Street and Massachusetts Avenue storefronts for review and approval by the Department of Planning and Community Development.
8. For any change in tenancy, the Owner shall require tenants conform with the approved signage template for storefronts and Section 6.2 of the Zoning Bylaw. Any deviation from those requirements will require tenant applicants to submit an Environmental Design Review Special Permit application for review and approval by the Arlington Redevelopment Board.
9. The Owner shall provide a final plan with required building materials as approved by the Arlington Historical Commission to the Department of Planning and Community Development for approval by the Department. The Owner shall not install PVC at the cornice or trim. The Owner must install wrought iron or similar for railings. The Owner also shall not install board and batten for any exterior surface.
10. The Owner shall not allow wall-mounted mechanical equipment to be installed on the ground-level over or along the alleyway at the rear of the property.

11. The Owner shall demonstrate that at least 50% of the roof shall be ready and provide for solar access.

I hereby certify this is a True Copy of the Decision of
the Arlington Redevelopment Board as filed with the
Office of the Town Clerk of the Town of
Arlington, Massachusetts on 11/9/2021
and that 20 days have elapsed after the Decision and no
Appeal has been filed. ATTEST:

11/30/21
Date of Issue


Town Clerk

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TOWN CLERK'S OFFICE
ARLINGTON, MA 02174
2021 NOV -9 AM 9:57



Town of Arlington, Massachusetts

2026 Meeting Schedule – January

Summary:

9:25 pm The Board will vote to approve the dates of their January 2026 meetings.

ATTACHMENTS:

	Type	File Name	Description
▢	Reference Material	Proposed_Meeting_Schedule_2026.pdf	Proposed Meeting Schedule 2026



ARLINGTON REDEVELOPMENT BOARD

TOWN HALL, ARLINGTON, MASSACHUSETTS 02476

TELEPHONE 781-316-3090

2026 Proposed Meeting Schedule

(updated October 15, 2025)

In general, the ARB meets at 7:30 pm on the 1st and 3rd Monday of every month. Monday holidays or other events may cause this schedule to change. If there are no pressing agenda items, meetings may be cancelled.

January 12	June 15
January 26	July 6
February 9	July 20
February 23	August 10
March 2	September 14
March 16	September 28
March 30	October 5
April 6	October 19
April 27*	November 2
May 4*	November 16
May 18*	December 7
June 1	December 21

** Subject to Town Meeting schedule*

NOTE: Holidays in 2026 include the following:

- January 1 – New Year's Day
- January 19 – Martin Luther King Jr. Day
- February 16 – Presidents' Day
- April 1 – first night of Passover
- April 20 – Patriot's Day
- May 25 – Memorial Day
- June 19 – Juneteenth
- July 4 – Independence Day
- September 7 – Labor Day
- September 11-13 – Rosh Hashanah
- September 20-21 – Yom Kippur
- October 12 – Indigenous People's Day
- November 11 – Veteran's Day
- November 26 – Thanksgiving
- December 25 – Christmas Day



Town of Arlington, Massachusetts

Correspondence

Summary:

18 Grafton St:

- Fleming, J - 11/1/25

ATTACHMENTS:

Type	File Name	Description
Correspondence	18_Grafton_-_11012025_-_Fleming__J.pdf	18 Grafton - 11012025 - Fleming, J

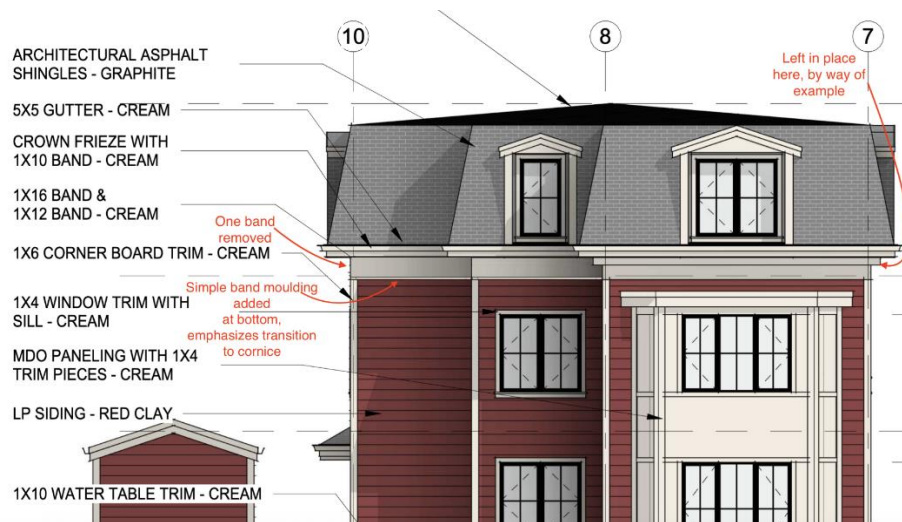
From: James Fleming
Sent: Saturday, November 1, 2025 10:43 PM
To: Claire Ricker
Subject: comments on 18 Grafton st

I've no issue with the size or number of units in the project. I wanted to offer a simple tweak to the plans that should make it look better, sell better, and blend in with the neighborhood.

The image below shows an adjustment to the detail in the cornice of the structure. There are local examples on [Winter](#) and [Lake](#) streets to draw inspiration from. Specifically:

1) The 1x16 and 1x12 band as detailed originally (see far right of image where I left the rendering unmodified) has an extra "step" in the cornice. This detail has no historic precedent - you would never see this on a historic mansard structure. In this case, it makes the cornice appear visually funky.

My tweak is simple - keep the vertical frieze board and remove the other band (detailed on the far right of the image). This is in keeping with how Mansard cornices were traditionally detailed.



2) In mansard buildings there was traditionally a moulding on the frieze where the side walls met the cornice. This served to emphasize the transition to the cornice, and, in many but not all cases, provided visual support for brackets. I think a simple moulding added here would look great!

